THE STUDENT'S HARMONY

MANSFIELD

PREFACE.

HAVING no wish whatever to add to the defects of this little work by the insertion of the orthodox apologetical preface, the Author proposes to confine himself, in the limited space allowed him, to a short explanation of the purpose, style, and theory of THE STUDENT'S HARMONY.

As implied by its title, the book is essentially designed for students; but, while primarily intended to ensure success in examination work, it claims to be equally adapted to give the student a knowledge of chord construction and progression sufficient to enable him to analyze the harmonic structure of the classics, and to solve the problems contained in some of the finer progressions of the great masters.

In style, while endeavouring to avoid the Scylla of pedantry, every effort has been made not to fall into the Charybdis of superficiality, remembering that a student's harmony should be instructive first and readable afterwards. The divisions into sections and the frequent use of cross references will, it is hoped, be of immense service in refreshing the memory as to the meaning of the terms employed in the text, and removing the difficulties which may occur in the working of the exercises. In the latter there has been no attempt at originality; only an honest effort to acquaint the student with ordinary harmonic progressions. Nor should the exercises be regarded as models of musical composition, the idea of the writer being to introduce therein as many examples as possible of the particular chord or chords to which the chapters preceding the various exercises are devoted. The original examples occurring in the text apply almost exclusively to vocal harmony, it being believed that after the acquisition of this art the student will find no great difficulty in writing under the freer conditions of instrumental music. A series of selected illustrations, numbering over 400, has also been inserted, in the compilation of which every effort has been made in the direction of eclecticism, the examples being cited less as authorities than as proofs that the rules laid down in this work are based upon the practice of all good classical and modern composers. For quotations from his own humble

contributions to musical literature the Author makes no apology. These examples are simply inserted to show the student how a fellow student has endeavoured to carry out the rules he suggests for the guidance of others. In all cases preference has been given to examples illustrating as simply and concisely as practicable the chord or progression under discussion, and containing as few chords as possible which, at that particular stage of his progress, must be unfamiliar to the student. The connection should in all cases be consulted, and efforts made to discover similar illustrations to those given in the text. Those assigned to the appendix are considered of secondary importance, or contain instances of exceptional treatment or progression. The hints upon the harmonization of melody form another special feature of the work, and one which has been lamentably neglected in several larger and more pretentious text books. Finally, the questions at the end of each chapter are designed to assist both teacher and student in preparing for examinations in the theory and practice of harmony.

The theory adopted in this work is one which—subject to the modifications dictated by increased knowledge and observation—the Author adopted many years ago, at a time when the student had not access to so many excellent manuals as are now to be obtained. This theory, despite its want of originality, he has been using with more or less success ever since, and it is satisfactory to find that it is in general agreement with the works of Macfarren, Prout, and others. Ignoring any scientific basis, it leaves the student perfectly free to accept any other system upon which his private judgment may ultimately decide, and its adoption in the present work is entirely due to the fact that it is *convenient*, and can be made to satisfactorily explain the harmonic progressions of the great composers. Beyond this no system of harmony should be required to go.

ORLANDO A. MANSFIELD.

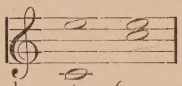
February, 1896.

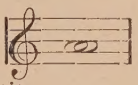
INTRODUCTION.

INTERVALS.

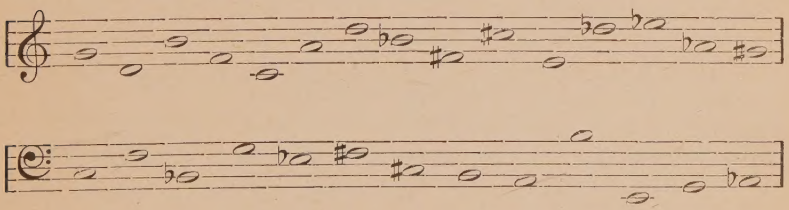
The difference in pitch between two sounds is called an interval.

The name of an interval is determined by the number of letters it includes. Thus C, E is called a third, because it includes the three letters **C. D. E.** Altering the letters by sharps or flats does not change the name of the interval, therefore C - E♭, C♯ - E, C♯ - E♯, C♯ - E♭, are called thirds.

All intervals are included within the Octave, therefore  are thirds, as the addition of the *8va* to an interval does not change its character (an exception to this will be pointed out further on.)

Two sounds of the same pitch are called a prime or unison, written thus:  the prime is not an interval, since interval means difference of pitch not identity.

Write seconds, thirds, fourths, fifths, sixths, and sevenths, over the following notes, go by **letters** only, use no sharps or flats.



Intervals may be major, minor, augmented, diminished or perfect; this is determined by the number of half tones they contain.

In the following table all the intervals that are of practical use are given.

Those in the first column are called natural intervals, they are all found in the major scale. Those in the second column are called chromatic intervals, they are found in the harmonic minor scale, and in altered or chromatic chords in both major and minor scale.

Table 1. **Natural Intervals.** **Chromatic Intervals.**

Seconds.
Minor. Major. Augmented.

Thirds.
Minor Major. Diminished. Augmented.

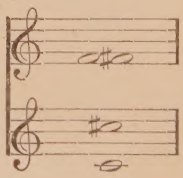
Fourths.
Perfect. Augmented. Diminished.

Fifths.
Diminished. Perfect. Augmented.

Sixths.
Minor. Major. Augmented. Diminished.

Seventh.
Minor. Major. Diminished.

In addition to these the following may be found, but they do not exist in the scale or in any chord combination.



Chromatic half-tone.

Augmented octave.

Table 2.

Seconds. Thirds. Fourths.

Seventh. Sixths. Fifths.

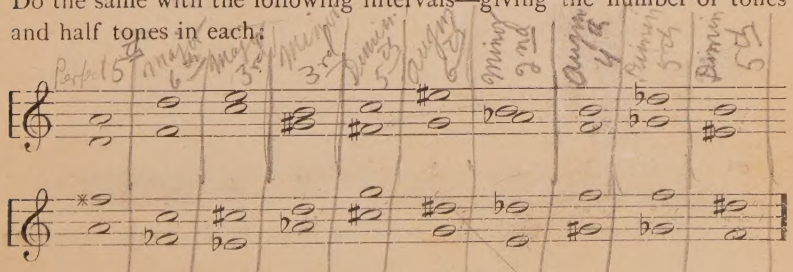
Natural Intervals.

Minor Second—	Contains one half tone.
Major Second—	Contains two half tones.
Minor Third—	Contains three half tones.
Major Third—	Contains four half tones.
Perfect Fourth—	Contains five half tones.
Augmented Fourth—	Contains six half tones.
Diminished Fifth—	Contains six half tones.
Perfect Fifth—	Contains seven half tones.
Minor Sixth—	Contains eight half tones.
Major Sixth—	Contains nine half tones.
Minor Seventh—	Contains ten half tones.
Major Seventh—	Contains eleven half tones.

Chromatic Intervals.

Augmented Second—	Contains three half tones.
Diminished Third—	Contains two half tones.
Augmented Third—	Contains five half tones.
Diminished Fourth—	Contains four half tones.
Augmented Fifth—	Contains eight half tones.
Augmented Sixth—	Contains ten half tones.
Diminished Sixth—	Contains seven half tones.
Diminished Seventh—	Contains ~~ten~~ 9 half tones.

Return now to the intervals first written and give their names and state whether they are major, minor, perfect, augmented or diminished. Do the same with the following intervals—giving the number of tones and half tones in each:



Inversion of Intervals.

An interval may be inverted by moving the upper note down an octave, or the lower note up an octave. In table 2, the intervals are given on the upper staff, and their inversions on the lower staff.

It will be seen that:

The Inversion of Seconds produces Sevenths,
The Inversion of Thirds produces Sixths, } and the reverse.
The Inversion of Fourths produces Fifths,

Also the Inversion of Minor produces Major,
The Inversion of Perfect produces Perfect, } and the reverse.
The Inversion of Diminished produces Augmented,

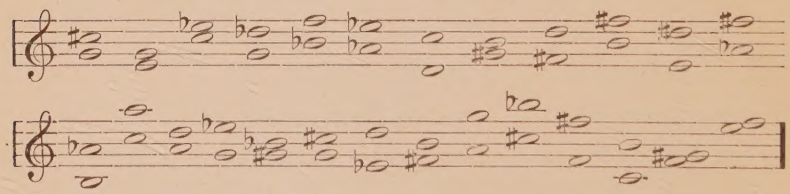
Also that any Interval and its Inversion together make an octave—twelve half tones.

Intervals are also divided into consonant and dissonant.

Consonant, major and minor 3d and 6th; perfect: 4, 5 and 8; dissonant, seconds, sevenths and all augmented and diminished intervals. An augmented interval is a half tone greater than perfect or major: a diminished interval is a half tone less than perfect or minor. Consonants are further divided into perfect and imperfect, perfect are 4, 5 and 8, called perfect because any alteration of them produces a dissonant. Imperfect, major and minor 3d and 6th; because they are equally consonant whether major or minor.

Go over all the intervals written, invert them and state what the result is.

State the nature of every interval and its inversion in the following table, also whether it is consonant or dissonant, and if consonant whether perfect or imperfect.



Natural Intervals in the Major Scale.

Minor Seconds—between 3 and 4, 7 and 8 degrees.

Major Seconds—between 1 2, 2 3, 4 5, 5 6, 6 7 degrees.

Minor Thirds—between 2 4, 3 5, 6 8, 7 and octave of 2d degree.

Major Thirds—between 1 3, 4 6, 5 7 degrees.

Perfect Fourths—all except that between 4 - 7, which is augmented.

Perfect Fifths—all except that between 7 and octave of 4, which is diminished.

The Major and Minor 7ths and 6ths may be found by inverting the seconds and thirds.

Chromatic Intervals in the Minor Scale.

Augmented Second—between natural 6th and raised 7th.

Diminished Fourth—between raised 7th and octave of 3d.

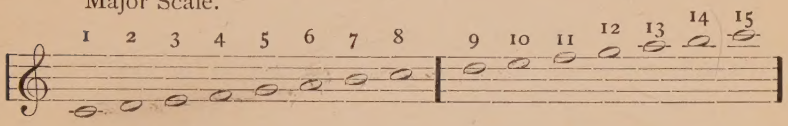
Augmented Fifth—between 3 and raised 7th.

Diminished Seventh—between raised 7 and octave of 6th.

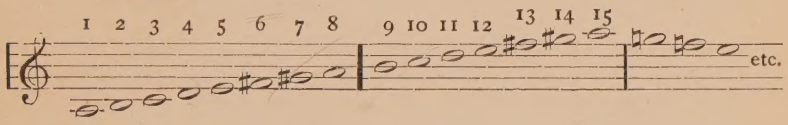
The remaining chromatic intervals do not exist in the scale, either major or minor.

The following scales are extended to two octaves so that every interval and its inversion may be readily found.

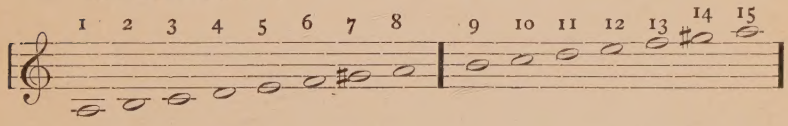
Major Scale.



Melodic Minor.



Harmonic Minor.



Where do the minor seconds occur in the major scale?

Where do the major seconds occur in the major scale?

Where do the minor seconds occur in the minor scale?

Where do the major seconds occur in the minor scale?

Write the major and minor thirds that may be found in F, G, A, B, D, E major; and in the same keys, changed to minor.

Where is the augmented second found?

Write the augmented seconds in the above minor keys.

How many perfect fifths are in the major scale,

How many diminished fifths are in the major scale?

How many perfect fifths are in the minor scale?

How many diminished fifths are in the minor scale?

May any other kind of fifth be found in the minor scale?

How many diminished fifths in the major and minor scales?

Having written the above go over them again and invert them.

THE STUDENT'S HARMONY.

CHAPTER I.

1.—**Harmony** may be defined as that branch of musical study which relates to the construction, classification, and progression of chords.

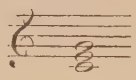
2.—A **chord** consists of not less than three notes which must be selected from a given scale and sounded simultaneously, or, in the case of an arpeggio, successively.

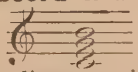
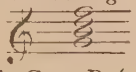
3.—The **key of a chord** (§60) is that of the scale from which the notes employed in its construction are derived. If the notes of a chord be common to several scales (§19) the key of such a chord is identical with that of the context, and may be determined by a reference to the latter.

4.—The **name of a chord** is derived from the compass and quality of its intervals, as the chord of the diminished 7th (§185), the chord of the augmented 6th (§248), etc.

5.—Hence, because chords belong to definite keys and contain various intervals, a knowledge of scales, intervals, and the rudiments of music generally, is an essential preliminary to the study of harmony, and the possession of this knowledge on the part of the student is presumed throughout this work.

6.—With reference to the impression they produce upon the ear, chords are divided into two classes,—**concords** and **discords.** These differ from each other in *construction*, in *progression*, and in *mental effect.*

7.—A **concord** is *a chord consisting of consonant intervals only*, as :— 
Here the intervals C to E (a major 3rd), C to G (a perfect 5th), and E to G (a minor 3rd), are all consonant.

8.—A **discord** is *a chord containing one or more dissonant intervals*, as :—  or  Here the first chord contains but one dissonant interval, C to B (a major 7th), while the second chord contains two dissonant intervals, G to F (a minor 7th), and B to F (a diminished 5th). But as experiment will prove the first

discord to be the more poignant of the two, we infer that the character of a discord is determined by the *nature* rather than by the number of the dissonant intervals it contains.

9.—In progression concords differ from discords, because, subject to the rules of correct part-writing (Chaps. IV. & V.), concords may succeed each other in almost any order, while discords have fixed progressions, frequently require preparation (§74), and, in all cases, resolution (§87).

10.—Finally, concords can be distinguished from discords in that, like the consonant intervals of which they are composed, they leave a satisfactory and finished effect upon the ear. Hence, every piece of music must terminate with a concord. But a discord does not produce an unpleasant effect unless improperly approached or quitted; it merely lacks finality, and fails to impart a feeling of repose.

Questions on Chapter I.

1.—Define Harmony.

2.—How many notes are required to form a chord?

3.—Distinguish between a chord and an arpeggio.

4.—How is the key of a chord determined?

5.—State the sources from which the name of a chord is derived.

6.—What knowledge is necessary to a correct understanding of Harmony, and for what reason?

7.—Distinguish between concords and discords as regards (*a*) construction, (*b*) progression, and (*c*) effect.

8.—Why cannot a piece of music terminate with a discord?

9.—Upon what does the harshness of a discord depend?

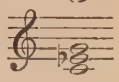
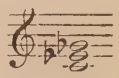
CHAPTER II.

Triads: their Construction and Classification.

11.—If, upon any given note in any key, we endeavour to form a chord, our first impulse will be to add to the note given (in conformity with the key signature) a note a 3rd above, that being the nearest and most satisfactory consonant interval. In fact, all chords (with the exception of those described in Chap. XVII.) are originally formed by ascending by 3rds from given notes called **roots, radical** or **fundamental basses.** But as two sounds a 3rd apart are too fragmentary in construction and too indefinite in tonality to constitute a chord, we add (in the same key as the note and its 3rd already obtained) another 3rd, a 5th from our root. This gives us the number of notes sufficient to form a chord (§2), and termed a **triad**, because consisting of three sounds, of which the second shall be a 3rd above the first, and the third a 3rd above the second.

12.—Like other chords, triads derive their names from the quality of their intervals (§4).

TABLE OF TRIADS.

NAME.	CHARACTER.	COMPOSITION.	
Major.	Concord (§7).	Major 3rd and perfect 5th* (or a minor 3rd above a major).	
Minor.	do.	Minor 3rd and perfect 5th* (or a major 3rd above a minor).	
Diminished or Imperfect.	Discord (§8).	Minor 3rd and diminished 5th* (or two minor 3rds).	
Augmented, Sharp or Extreme.	do.	Major 3rd and augmented 5th* (or two major 3rds).	

13.—The major and minor triads derive their names from the quality of their respective 3rds, the augmented and diminished triads from that of their respective 5ths. Hence, to determine the name of any given triad we must ascertain the quality of both its 3rd and its 5th.

14.—On account of their frequent occurrence in music, the major and minor triads are often called **common chords** A common chord must have a perfect 5th, and can be changed from major into minor (or *vice versâ*) by lowering (or raising) the 3rd a chromatic semitone. The dissonant triads (which are really fragments of discords to be explained

* *i.e.* from the bass or lowest note.

elsewhere) (§§91, 187, 224) are not common chords, because their 5ths are not perfect. Hence, while all common chords are triads, only major and minor triads are common chords.

15.—Common chords are the only concords (§7) possible in harmony, every other combination of sounds involving the introduction of an interval dissonant either with the root or with some other note of the chord.*

Questions on Chapter II.

1.—How are chords formed?

2.—What is the root of a chord, and by what other name or names is it known?

3.—Why is a triad so called?

4.—Which triads are concords, and which discords?

5.—By what other names are diminished and augmented triads known?

6.—What are major and minor triads sometimes called?

7.—Why are the dissonant triads not termed common chords?

8.—What intervals respectively prove the diminished and augmented triads to be discords?

9.—Why cannot the character of a triad be determined by reference to one of its intervals only?

10.—In two different ways express the difference between a major and a minor triad.

11.—Write out major, minor, diminished and augmented triads on each of the following notes: G, B, A♭, and F♯.

12.—Account for the name given, and the important position assigned, to the common chord in harmony.

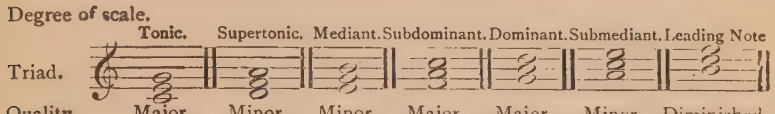
* It should, however, be observed that certain other chords, to be explained hereafter, are *treated* as concords, *e.g.*, the first inversions of common chords (§64), the first inversions of the diminished triads (see note to p. 35), the chord of the Neapolitan 6th (§267), &c.

CHAPTER III.

Triads *(continued)*:

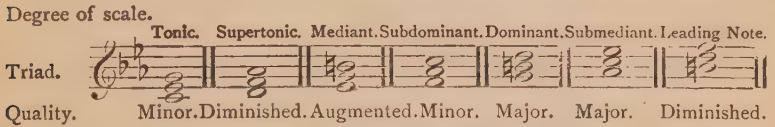
Their Tonality and Comparative Importance.

16.—Every degree of a major scale will bear a triad (§11) in accordance with the signature, *e.g.*, in C major,



Hence, in every major key we have three major triads, on the tonic, subdominant, and dominant; three minor triads, on the supertonic, mediant, and submediant; and a diminished triad on the leading note.

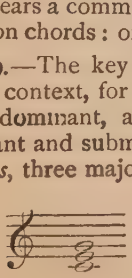
17.—Similarly every degree of a minor scale will bear a triad in accordance with the signature (it being understood that the *harmonic* form of the minor scale is the one used in chord construction*), *e.g.* in C minor,



Hence, in every minor key we have two major triads, on the dominant and submediant; two minor triads, on the tonic and subdominant; two diminished triads, on the supertonic and leading note; and an augmented triad on the mediant.

18.—Comparing §§16 and 17, we notice that the triads on the dominant and leading note of any major scale and its tonic minor are identical; also that the *dominant triad in a minor key is always a major triad;* and that while every degree of a major scale, except the leading note, bears a common chord, the minor scale only furnishes us with four common chords: on the tonic, subdominant, dominant, and submediant.

19.—The key of a triad cannot be determined without reference to the context, for it is evident that as major triads are found on the tonic, dominant, and subdominant of a major scale, and upon the dominant and submediant of a minor scale, *a major triad is common to five keys*, three major and two minor, *e.g.*,



may be on the
- Tonic in C major.
- Subdominant in G major.
- Dominant in F major.
- Dominant in F minor.
- Submediant in E minor.

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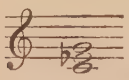
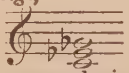
* See Appendix.

Similarly, as there are three minor triads in a major key, and two in a minor key, it follows that ***a minor triad is also common to five keys***, three major and two minor, *e.g.*,



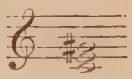
may be on the
- Supertonic in B♭ major.
- Mediant in A♭ major.
- Submediant in E♭ major.
- Tonic in C minor.
- Subdominant in G minor.

Also, as there are two diminished triads in a minor key and one in a major, ***a diminished triad is common to three keys***, one major and two minor, *e.g.*,



may be on the
- Leading note of D♭ major.
- Leading note of D♭ minor.
- Supertonic of B♭ minor.

The augmented triad, however, *as far as our present knowledge extends* (*vide* §224), can only belong to one key, *e.g.*, can only be on the mediant of A minor.



20.—Of the triads upon the various degrees of a major or a minor scale, the principal are those upon the tonic, the subdominant, and the dominant. These, which between them contain all the notes of the scale, are termed **fundamental, principal,** or **primary** triads, the other triads being called **secondary**. The triad upon the tonic of any scale is said to be the common chord of that key, the key chord, or the tonic common chord Hence the expression "chord of C" would mean C, E, and G.

Questions and Exercises on Chapter III.

1.—Which degrees of a major scale bear minor triads?

2.—Upon what degrees of a minor scale do major triads occur?

3.—State where the dissonant triads occur in major and minor keys.

4.—Name the triads which are identical in a major key and its tonic minor.

5.—In a minor key, how many triads include the leading note?

6.—Why cannot the key of a triad be determined apart from the context?

7.—To how many major and minor keys can (*a*) a major, (*b*) a minor, (*c*) a diminished, and (*d*) an augmented triad respectively belong?

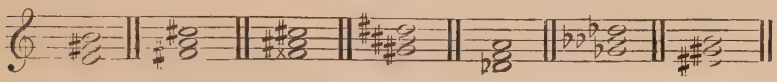
8.—Distinguish between primary and secondary triads.

9.—By what other names are primary triads known?

10.—Write out a list of all the triads to be found upon the various degrees of the scales of G♭ major and G♯ minor, B major and B♭ minor.

11.—Write an augmented triad on A♭ and one on A♮, and say to what key each triad belongs.

12.—Describe the following triads, and state the keys to which they may belong:—



13.—Write out, and state the quality of the following:—

(*a*) Supertonic triad in E♭ minor.
(*b*) Subdominant triad in F minor.
(*c*) Supertonic triad in F♯ major.
(*d*) Mediant triad in A♭ minor.
(*e*) Tonic triad in G♭ minor.
(*f*) Dominant triad in B minor.
(*g*) Submediant triad in G minor.
(*h*) Mediant triad in C♯ major.
(*i*) Subdominant triad in D♭ major.
(*j*) Dominant triad in B major.
(*k*) Submediant triad in F♯ major.

14.—Say which of the above triads are identical.

15.—What is meant by the expression "chord of G minor," and by what other names could such a chord be called?

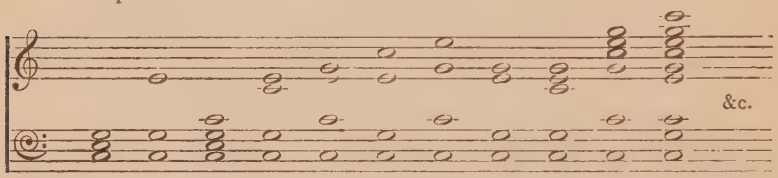
16.—Write down a major triad on D♯, then change it enharmonically into another major triad, and state the keys to which the triads may respectively belong.

17.—Can more than one common chord be found upon the same root?

CHAPTER IV.

Some Elementary Rules of Figured Bass and Part-writing.

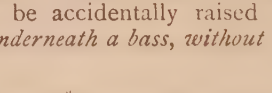
21.—A chord is said to be in its **original** or **root position** when its root (§11) is in the bass (*i.e.*, the lowest part, irrespective of pitch), whatever may be the arrangement or doubling of the upper notes. Hence all the following chords of C major are in their root position :—



22.—A *figured bass*, or "*thorough*"* *bass*, consists of a bass with figures underneath denoting certain intervals. In figuring basses *the highest number is placed uppermost*, doublings are not regarded, nor is the particular octave in which an interval occurs specified, compound intervals (*i.e.* intervals exceeding the compass of an octave), with the exception of the 9th (*vide* Chaps. XIII. & XIV.), being regarded as simple. Hence all the chords in §21 would be figured $\frac{5}{3}$, because they contain a 5th and a 3rd from the bass note.

23.—But, as **common chords** are of such frequent occurrence, they **are not figured when in their root position** unless (*a*) they are preceded by another chord on the same bass note, or (*b*) contain accidentals. The same applies to dissonant triads.

24.—When an accidental is placed on the left hand side of a figure, as ♯5, it indicates that the particular interval denoted by that figure is to be accidentally raised or lowered a semitone; but *an accidental underneath a bass, without a figure attached, refers to the 3rd of the chord.*

Hence  would be figured ♯5 and ♭$\frac{5}{}$ respectively, it being understood that the ♯5 implies a 3, and that the unfigured ♭ of the second chord refers to the 3rd from the bass note.

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* *i.e.* "through" (Italian *continuo*), and so called because placed on a separate staff, at the bottom of the score, right through the composition. There is in existence a MS. score of an anthem, "Lord, let me know my end," by Dr. M. Greene, entitled "A Funeral Anthym for 4 Voices to a *Walking* Thorough Base, the Finest Anthym yt Ever was Made."

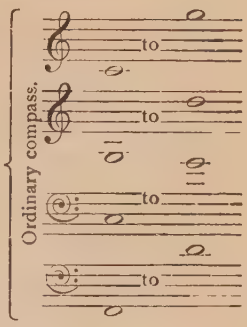
25.—In vocal music the usual number of parts is *four*, viz.—

Soprano (or treble), sung by high voices of women and boys.

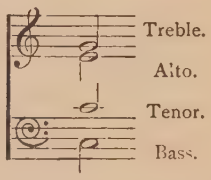
Alto, sung by low voices of women and boys, or high voices of men.

Tenor, sung by high voices of men.

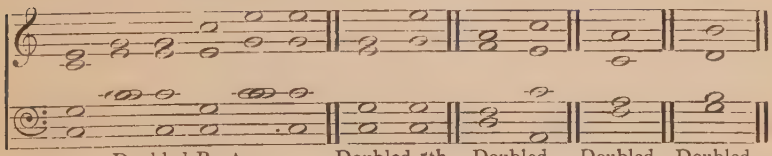
Bass sung by low voices of men.



In **short score** the treble and alto parts are written in the treble clef upon the upper staff, the bass and tenor being placed upon the lower staff and written in the bass clef, *e.g.*,



26.—As a triad consists of only three notes, **one** of these must be doubled, either in the octave or the unison, in order to form a four-part chord. In the common chord **the root is always the best note to double**, or, failing this, the 5th or even the *minor* 3rd; the major 3rd should rarely be doubled (§42), and the doubled leading note should be most carefully avoided (§37).*

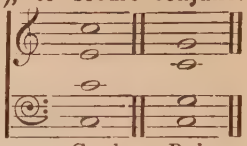


Doubled Root.	Doubled 5th.	Doubled minor 3rd.	Doubled major 3rd.	Doubled leading note.
Good.	**Fair.**	**Fair.**	Allowed.	Bad.

27.—It is interesting to notice that if we double the 3rds in the minor triads belonging to a major key, the doubled note must be either the subdominant, the dominant, or the tonic, these notes being the 3rds of the supertonic, mediant, and submediant triads respectively.

* Rules for doublings in dissonant triads will be given later on, when the derivation of these chords is explained. For the present the student may double the bass note.

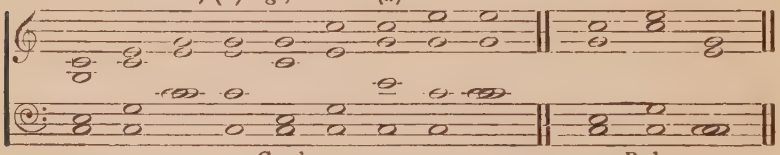
28.—In order to avoid consecutives (§31), to secure conjunct movement (§30), or to allow the leading note to ascend (§36), *it is sometimes necessary to omit the 5th from the root of a common chord.* In this case the root will be sung by three voices. The 3*rd* of a common chord can *never* be omitted.*



Good. Bad.

29.—In order to prevent thinness, the parts should be kept as equidistant as possible, none of the upper parts being, as a rule, more than an octave apart. When a wide gap is unavoidable, it should occur between the bass and tenor, (*a*) *e.g.*,

(*a*)



Good. Bad.

Questions and Exercises on Chapter IV.

1.—What is meant by the "root position" of a chord?

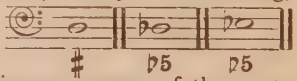
2.—What is a figured bass, and by what other names is it known?

3.—Give rules for the placing of the figures and the treatment of compound intervals when figuring basses.

4.—How and when is a common chord figured?

5.—Explain ♮5, and the meaning of an accidental without a figure.

6.—According to example in §24, correctly fill up the following, and say what intervals are implied in the figuring of each chord.



♯ ♭5 ♭5

7.—State the number, names, and ordinary compass of the parts usually employed in vocal music.

8.—What do you understand by the term "short score"?

9.—Why is it necessary to double one of the notes of a triad when writing in four parts?

10.—Give rules for doubling, and say what doublings are (*a*) merely tolerable, and (*b*) generally forbidden.

11.—What have you to remark upon the doubling of the 3rds of the minor triads of a major key?

12.—Which interval may, and which may not, be omitted in a common chord?

13.—Give a rule for the best position of the notes of a common chord, and say between which parts a wide interval is forbidden or permitted.

14.—According to the model given in §29, write, in as many good positions as possible, the common chords of E♭ minor, B♭ major, and G minor.

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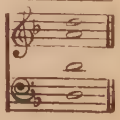
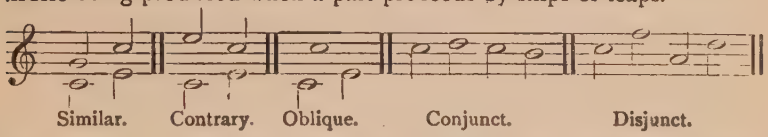
*Unless to produce a special effect, as in the last chord of the *Christe Eleison* of Mozart's "Requiem," where the voices end upon—described by one critic as "a Gothic combination, to which the ear is with difficulty reconciled."



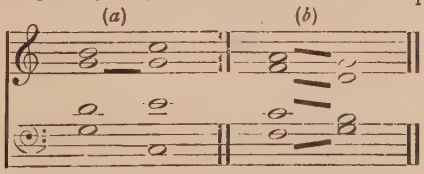
CHAPTER V.

On Consecutives and further Rules of Part-writing.

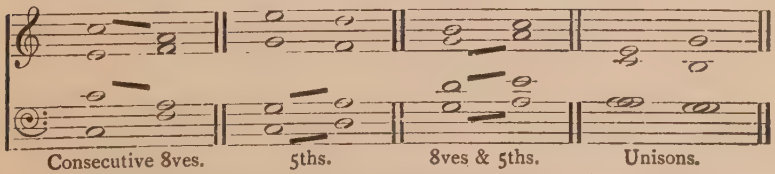
30.—When two or more parts move in the *same* direction, they are said to be in **similar motion**; when in *opposite* directions, in **contrary motion**; and when one or more parts move and one remains stationary, the movement is termed **oblique.*** **Conjunct movement** is that produced by a part proceeding by steps of a second; **disjunct movement** being produced when a part proceeds by skips or leaps.



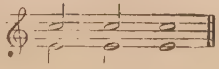
As a rule not more than three parts should move together in similar motion, which is considered to be much feebler than contrary and more likely to involve consecutives (§31). Every effort should be made to cause each part to move as conjunctly as possible, hence, at any rate in the student's earlier exercises, *notes common to two chords should be kept in the same part* (*a*), and when quitting a note a part should move to the note in the next chord nearest to the one about to be quitted (*b*), *e.g.*,



31.—In harmony it is strictly forbidden to have any parts moving in similar motion at the distance of an 8ve or a 5th. Such **progressions**, if occurring in a composition, are termed **consecutive** or **parallel** 8ves and 5ths. Apart from the ugliness of most consecutive 5ths, consecutive 8ves, 5ths, and unisons, are forbidden because the individuality of one of the parts causing the consecutives is, for the time being, lost. The avoidance of consecutive 5ths and 8ves is one of the greatest difficulties to be overcome in the early study of harmony.



* The term parallel movement is applied by some writers (*e.g.*, Albrechtsberger) to cases in which two or more notes are repeated between the same parts.



32.—The following instances of consecutives are not considered objectionable :—

(*a*) *When all the parts move in 8ves or unisons.* GLUCK—"Orpheus."

Ex. 1.

(*b*) *When a particular part is doubled throughout in the 8ve above or below, or both.*

SMART—"Andante in F."—(Organ).

Ex. 2.

Here, at *a*, the melody is doubled in the first and second 8ves below, while an inner part is also doubled in the second lower 8ve. Upper parts may be doubled in the 8ve above or below, but basses are generally doubled in the 8ve below.

(*c*) *When consecutive 8ves and 5ths are produced by contrary motion.*

S. S. WESLEY—"The Wilderness."

Ex. 3.

HAYDN—"Quartett in G." Op. 76, N . 1.

Ex. 4.

At *a* we have consecutive 8ves by contrary motion between the outs de parts, and at *b* and *c* consecutive 5ths by contrary motion between the lower parts. Although classed as allowable, consecutive 5ths and 8ves by contrary motion are not recommended for the student's imitation.

(*d*) *When a perfect 5th is followed by a diminished 5th* as at *b* in Ex. 5. This is allowed between *any* parts, but a diminished 5th followed by a perfect 5th, as at *a*, is forbidden between the *outside* or *extreme* parts.

HANDEL—"Judas."

Ex. 5.

(*e*) *When 8ves and 5ths are repeated*, as indicated by the dotted ties in Ex. 6.

MENDELSSOHN—"Lieder ohne Worte." No. 3, in A.

Ex. 6.

(*f*) When the 8ves, 5ths, or unisons, do not occur between the *same* parts, *e.g.*,

Here the dotted lines show the 8ves, and the angles show the 5ths, but the 8ve in the first chord is between the bass and the tenor, while in the second chord it is between the bass and alto. Similarly, the 5th in the first chord is between the tenor and the treble, but in the second chord it is between the tenor and the bass. (*See Appendix.*)

33.—No two parts should be allowed to overlap* (*a*), except occasionally in proceeding in the bass from dominant to tonic (*b*); nor, except as a last resource, should the parts be allowed to cross (*c*).

34.—**Augmented Intervals,** especially 2nds and 4ths, ** should be carefully avoided,† at least in preliminary exercises (§ 174), as should also the unvocal interval of a major 7th.

35.—When a part skips a diminished interval, it should return to a note within that interval:— The same applies to all wide skips.

* *i. e.* when the upper note of any two parts skips lower than the note previously sung by the voice beneath, or *vice versa*.

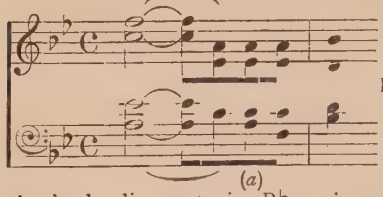
** called tritones because including three whole tones.

† *i. e.* in the progression of any part, unless in sequences or between repeated chords.

36.—The leading note should generally *ascend to the tonic*,* and should not descend to the dominant except in an arpeggio (as at *a* in Ex. 7), or when the dominant chord is repeated (*b*, Ex. 8).

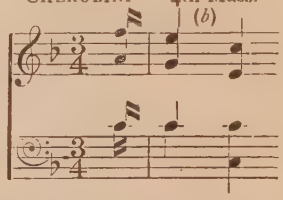
HAYDN—"Seasons."

Ex. 7.



CHERUBINI—"4th Mass."

Ex. 8.

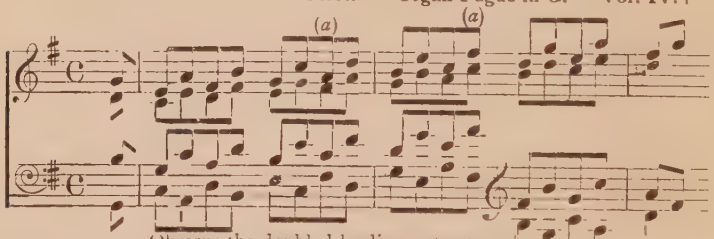


At *a*, A, the leading note in B♭ major, descends to the dominant, the bass moving in arpeggio (§2). At *b*, E, the leading note in the key of F major, descends to the dominant, the dominant chord being repeated.

37.—At *a* in Ex. 7 we have an allowed doubling of the leading note in arpeggio. This is also occasionally permitted when the leading note is the 5th of the triad on the mediant of a major key * * or in a **sequence**, *i. e.* the repetition of a passage of melody or harmony (or both) at a higher or lower pitch. (*See Appendix*, p. 292.)

BACH—"Organ Fugue in G.' Vol. IV.†

Ex. 9.

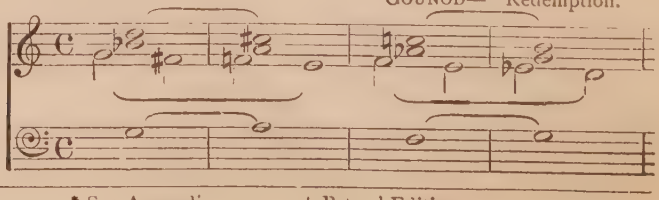


Observe the doubled leading note at *a*.

38.—Sequences are of two kinds, **real** and **tonal**. A real sequence is one in which the key changes at every repetition of the model, or one in which every interval of the subject is exactly reproduced, both cases necessitating perpetual **modulation** (*i.e.* change of key). An ascending real sequence is sometimes termed **Rosalia.** A tonal sequence, as its name implies, confines itself to the limits of the key, in which case the intervals of the model cannot be exactly reproduced, but major intervals have to be substituted for minor, and *vice versâ*. Ex. 9 shows an ascending tonal sequence. **Ex. 10 gives us a descending real sequence.**

GOUNOD—"Redemption.'

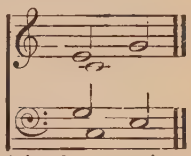
Ex. 10.



* See Appendix. † Peters' Edition.

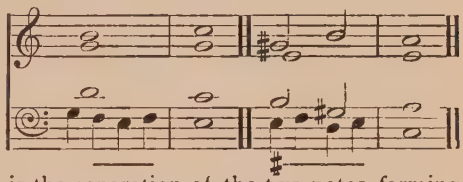
Sequences formed by the exclusive use of certain chords, such as supertonic, tonic and diminished 7ths, augmented 6ths and secondary 7ths, will be explained in the chapters dealing with those chords.

39.—When a part taking the 3rd of a chord moves to some other interval in the same chord, the 3rd should be transferred to another part, *e.g.*,

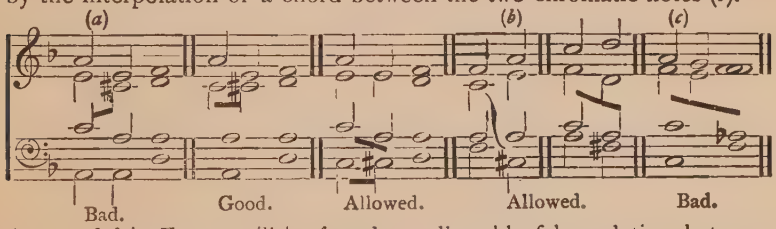


Here the tenor takes up the 3rd, E, quitted by the treble, and while the former goes from the 5th to the 3rd, the latter proceeds from the 3rd to the 5th, a common progression, of which examples will be found in the exercises following this chapter.

*40.—**Lines drawn under bass notes** signify that the notes of the chord preceding the lines are to be *repeated* or *sustained* (in the same or a different position) throughout the duration of the lines :—



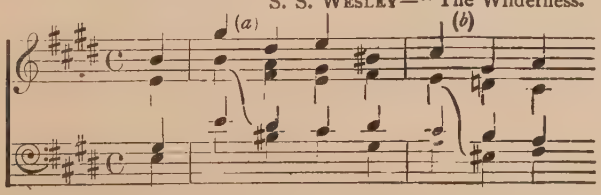
*41.—A **false relation** is the separation of the two notes forming a chromatic semitone by giving them to different parts in two successive chords instead of to the same part (*a*). A false relation is not considered objectionable when the 3rd of the first chord is the root or 5th of the second, or, in other words, when the false relation occurs between two chords of which the root of the second is distant a major 3rd or 6th above the other (*b*). But the bad effect of a false relation is not saved by the interpolation of a chord between the two chromatic notes (*c*).



At *a* and *b* in Ex. 11 will be found an allowable false relation between two chords whose roots (E and G♯, and A and C♯) are a major 3rd apart, and at *c* and *d*, Ex. 12, one between two chords whose roots (B♭ and G, and C and A) are a major 6th apart.

S. S. WESLEY—"The Wilderness."

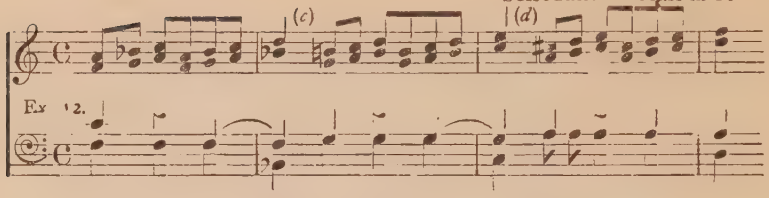
Ex. 11.



*See Appendix, p. 270.

SCHUBERT—"Mass in F."

Ex. 12.

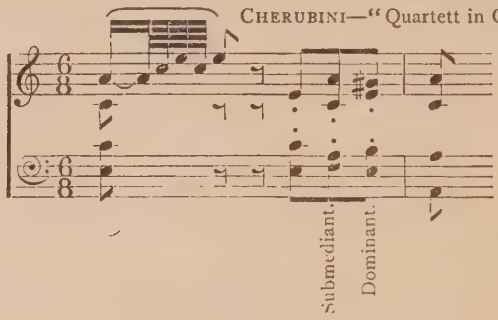


Observe the sequences—real in Ex. 12, and tonal in Ex. 11.

42.—When in a minor key the dominant chord is preceded or followed by that of the submediant, *the 3rd in the submediant chord must be doubled* in order to avoid consecutives or augmented intervals.

CHERUBINI—"Quartett in C."

Ex. 13.



QUESTIONS AND EXERCISES ON CHAPTER V.

1.—Describe the various methods of part progression, and say which are to be preferred.

2.—Give two rules for securing conjunct movement.

3.—What are the advantages to be obtained from the employment of contrary motion?

4.—What is meant by consecutive 8ves or 5ths, and by what other name are they sometimes called?

5.—Why are consecutives considered objectionable?

6.—Distinguish between consecutives and doublings, also between consecutives and repetitions.

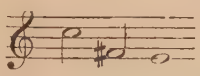
7.—When are consecutive 8ves tolerated?

8.—Name two cases in which consecutive 5ths are allowed.

9.—What do you understand by (*a*) the overlapping and (*b*) the crossing of parts?

10.—What melodic intervals* should be avoided in part-writing?

* *i.e.* intervals occurring between any two notes in the *same* part.

11.—Is the following  incorrect? If so, say why, and re-write it, substituting another note for the one requiring alteration.

12.—State two exceptions to the rule that the leading note must not descend to the dominant; also two exceptions to the rule that the leading note must not be doubled.

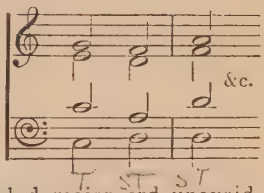
13.—Is there any exception to the rule which forbids the overlapping of parts?

14.—What is a sequence?

15.—How many kinds of sequences are there?

16.—Name them and distinguish between them.

17.—Continue the following sequence, and say whether real or tonal.



18.—When, and in what mode, is a doubled major 3rd unavoidable? Give examples in the keys of G and E minors.

19.—What is a false relation, and how may it be avoided?

20.—Explain the meaning of lines drawn underneath a bass.

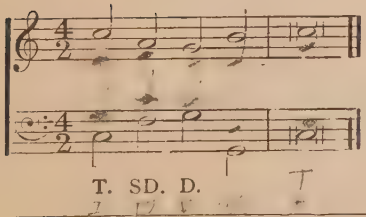
21.—What rule given in §28 determines the necessity for the statement made in §39?

22.—Name a particular case in which a false relation is objectionable, and one in which it is not so.

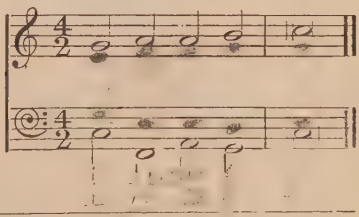
23.—What do you understand by the term Rosalia?

Exercises.—Tenor and Alto to be added.*

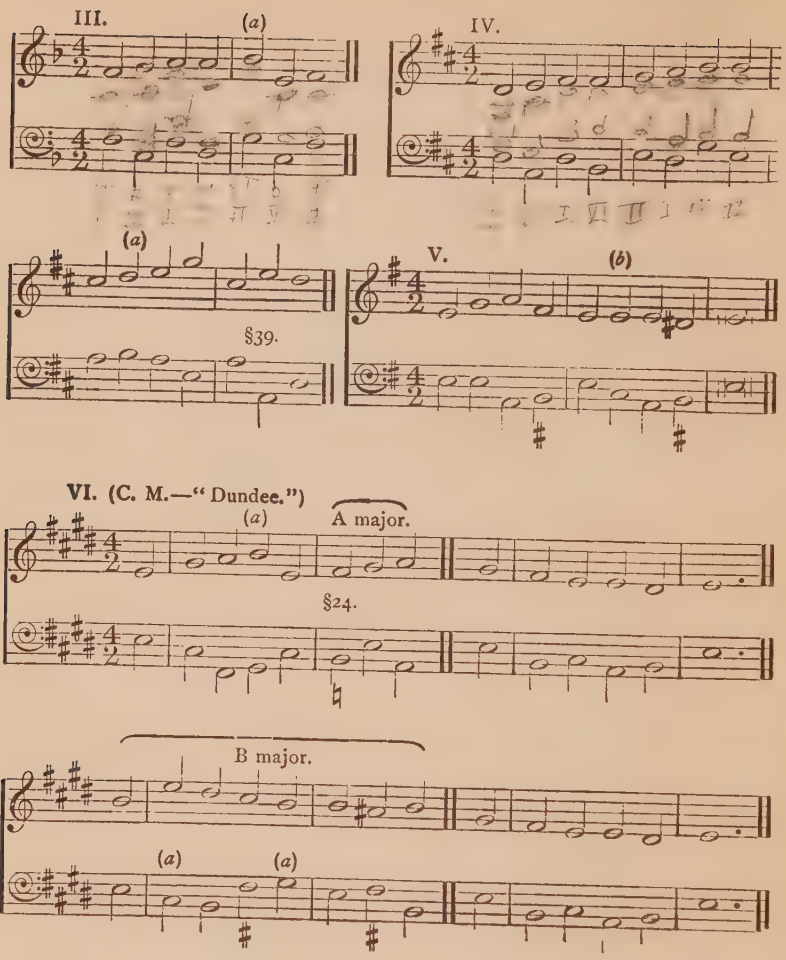
I.



II.

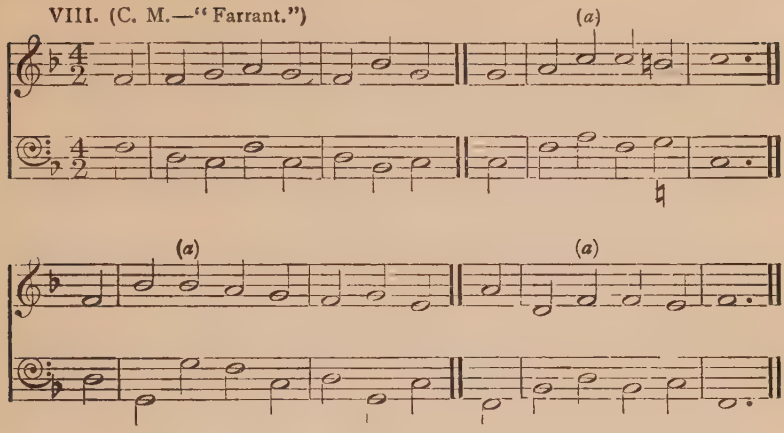


* Stems of notes in Alto to be turned down (𝅗𝅥), in Tenor up (𝅗𝅥). Denote by capital letters, as in Ex. I., the degrees of the scale upon which the triads occur, T. standing for tonic, ST. for supertonic, M. for mediant, &c. Endeavour to make the inside parts as interesting and melodious as possible.

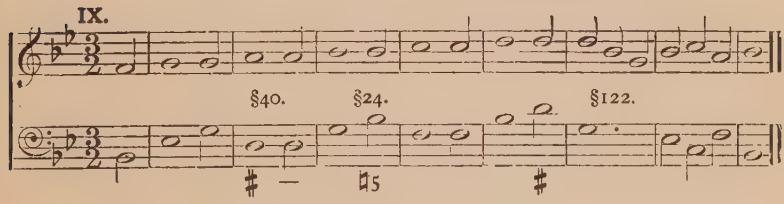


(a) Doubled minor 3rd. (b) Doubled major 3rd.

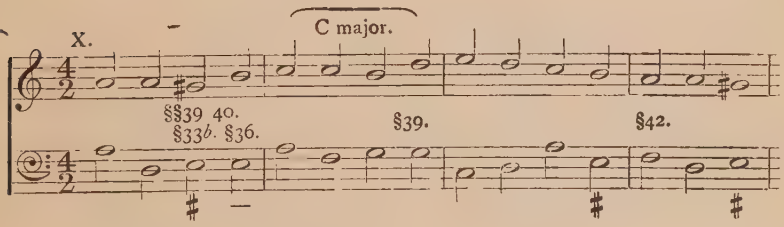
VIII. (C. M.—"Farrant.")

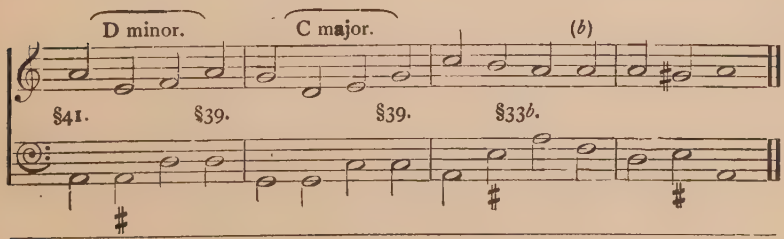


IX.

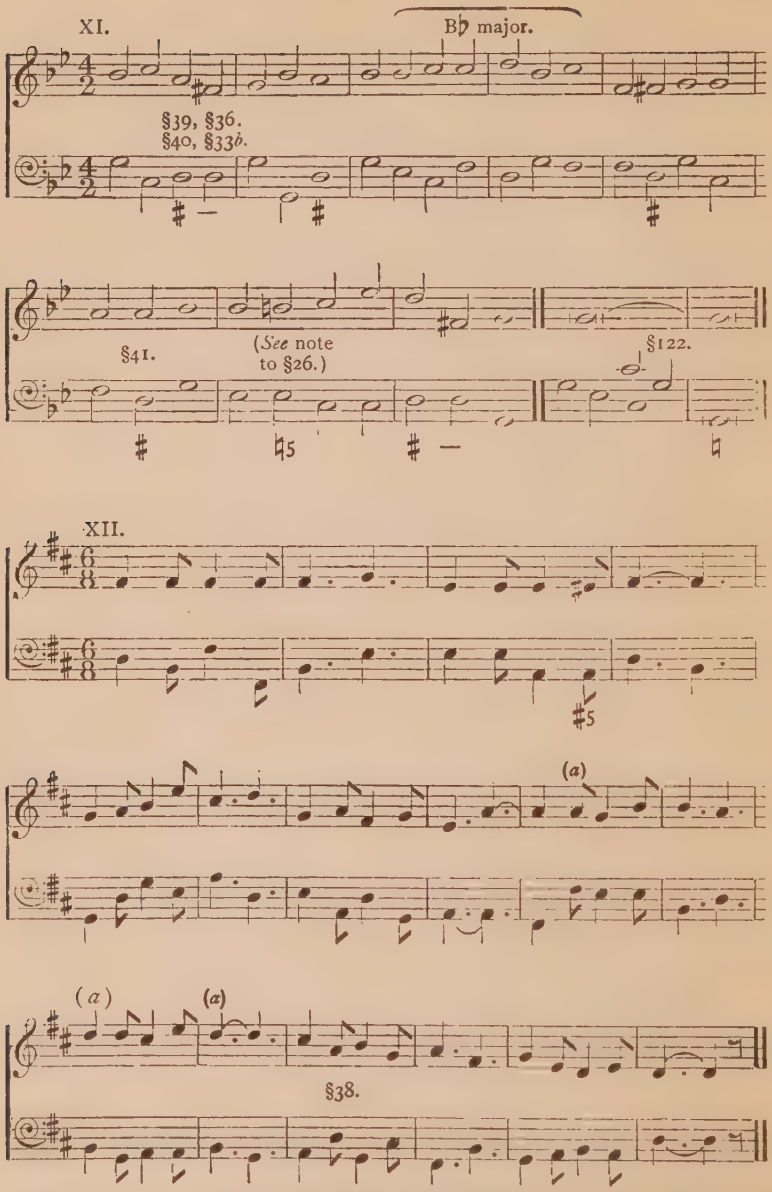


X.





(a) Doubled minor 3rd. (b) Doubled major 3rd.



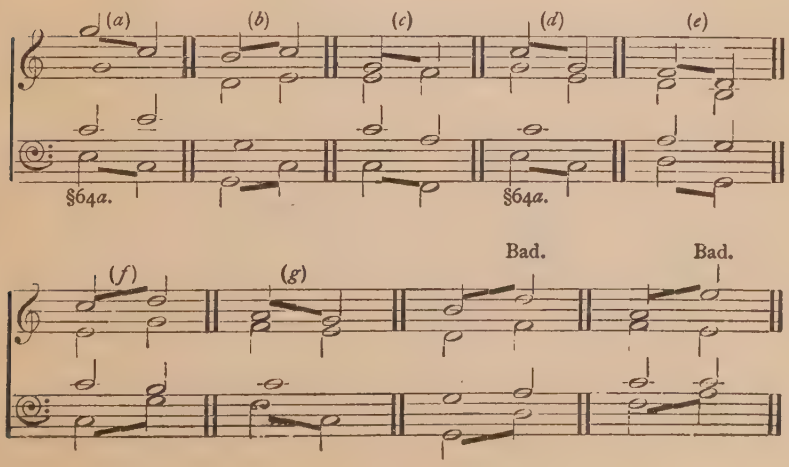
(*a*) Doubled minor 3rd. (*b*) Vide §23 and note to p. 9.

CHAPTER VI.

On adding Three Parts to a Figured Bass.

43.—Bearing in mind the rules already given, the student should now endeavour to add three upper parts—a tenor, an alto, and a treble—to a given bass. Care must be taken (*a*) to end upon the tonic in the melody of the last bar whenever possible, (*b*) to make the melody move conjunctly rather than by wide skips (of which two in the same direction are generally of bad effect), (*c*) to employ contrary and oblique motion in preference to similar, (*d*) to avoid hidden consecutives (§44) unless occurring as stated in the following section, and (*e*). in the case of a repeated bass, to vary the position of the upper parts. A melody moving in arpeggio is always effective and may be freely employed. Not more than three repeated notes should be used in succession in the upper part.

44.—When two parts move to an 8ve or a 5th by similar motion from any interval other than an 8ve or a 5th, such a progression is termed a **hidden consecutive,** and is forbidden between the outside or extreme parts, though allowed between any two inner or any outside and inner part, either between different notes of the same chord, or between notes of different chords if one of the parts move conjunctly. But hidden consecutives between the extreme parts are allowed, in the case of the 8ve, when occurring between different positions of the same chord (§63) as at (*a*), and when the bass proceeds from dominant to tonic (*b*) or from tonic to subdominant (*c*), the melody moving conjunctly. Hidden 5ths are also allowed between extreme parts when occurring between different positions of the same chord (*d*), between supertonic and dominant chords (*e*), and, when the melody moves conjunctly, between tonic and dominant (*f*) or subdominant and tonic chords (*g*), *e. g.*,



Questions on Chapter VI.

1.—Give five general rules for adding three upper parts to a figured bass.

2.—What do you understand by the expression "outside parts," and do you know of any other term possessing the same signification?

3.—What are hidden consecutives?

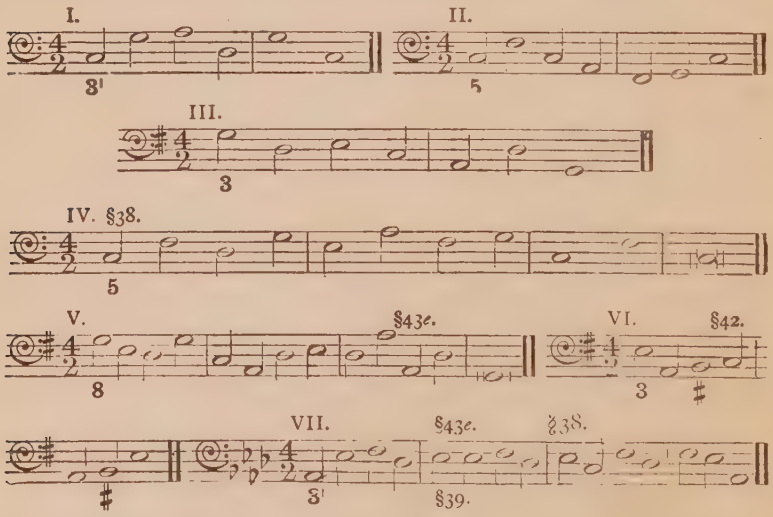
4.—Where are they allowed, and where forbidden?

5.—Name five special cases in which hidden consecutives are allowed to appear between the outside parts, and give examples of these exceptions in the keys of D major and B♭ major.

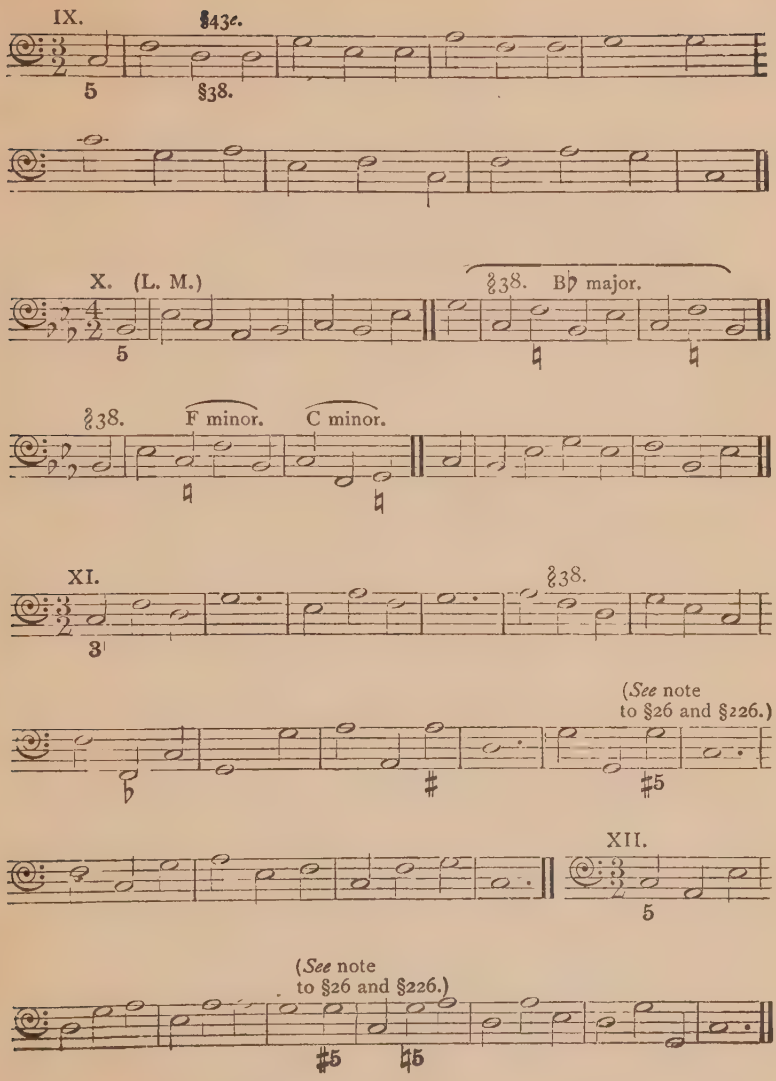
6.—Write at least four examples of the objectionable employment of hidden consecutives between the outside parts.

Exercises on Chapter VI.

N.B.—In the following exercises, in which only root positions of triads are to be employed, the particular interval from the bass upon which the melody is to commence is indicated by a figure which, however, is purely conventional and not usual.



* *i.e.* a Double Chant in which the melody and harmony of the third and fourth lines are those of the first and second reversed.


IX.
§43c.
5
§38.
X. (L. M.)
§38. B♭ major.
5
§38.
F minor.
C minor.
XI.
§38.
3
(See note
to §26 and §226.)
♭
♯
♯5
XII.
5
(See note
to §26 and §226.)
♯5
♮5

CHAPTER VII.

On Harmonizing Melodies.—Cadences and Modulation.

45.—Having shown how to add three upper parts to a given bass, we have now to reverse the process and add three parts below a given melody. Here the student has to depend more upon his musical sense and feeling than upon formal rules, and this, perhaps, accounts for the omission in so many popular text-books of harmony of any mention of this important branch of our subject. Yet, as we shall see, even with the limited resources at present at our disposal, melodies may be effectively harmonized and definite rules given for so doing.

46.—The rules already laid down with reference to the progression of parts, conjunct movement (§30), correct doublings, avoidance of false relations (§41), etc., apply with equal force to the harmonization of all melodies. Particular care should be taken to make the bass move in contrary motion with the treble, to avoid forbidden hidden consecutives between the outside parts (§44), and to ensure conjunct movement whenever possible. The skip of a major 6th in the bass should be avoided by writing the same notes, in inverse order, as a minor 3rd, *e.g.*,

47.—Every melody note, *regarded apart from the connection*, may belong to three triads, *e.g.* it may be the root of one, the 3rd of another, or the 5th of another. Thus the note C may be harmonized as the root of C major, the 3rd of A minor, or the 5th of F major. Also, as in harmonizing a melody we can use almost any triad in the key of that melody, it follows that the choice of chords is considerable. The following rules, however, should help to guide us in our selection :—

(*a*) Use primary triads (§20) whenever possible and effective.

(*b*) Use secondary triads (§20) sparingly, especially that of the mediant.

(*c*) The mediant triad should generally be followed by that of the submediant.

(*d*) The best progression of roots (§11) is that to a 4th or 5th above or below.*

(*e*) Avoid the juxtaposition of the mediant and subdominant triad, or the following of the supertonic triad by that of the tonic, or dominant by the subdominant, unless the latter of the two chords be inverted. *See* §81*b*, and §74*a*.

(*f*) Avoid the diminished triad in its primary† position, except in sequential passages (§38).

(*g*) From the tonic, dominant, or submediant triads, we can proceed to any common chord (§14) in the key.

(*h*) Avoid using upon an accented beat the bass note employed upon the weak accent immediately preceding, unless such notes be at the end and beginning of contiguous phrases, *e.g.*, between bars 2 and 3, Ex. X., page 46, or bear different harmonies above them as in the first two chords of Ex., 8, p. 14.

---

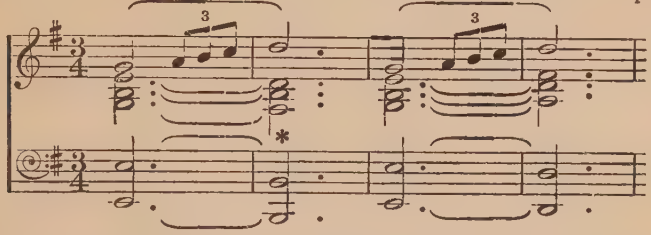
* The best succession of chords is formed by those which have one or more notes in common.

† *See* note to p. 36.

We give an example of the mediant triad followed by that of the submediant. The notes A and C in the melody are passing notes (§123), and do not affect the harmony.

SVENDSEN—"Romance." Op. 26.

Ex. 14.



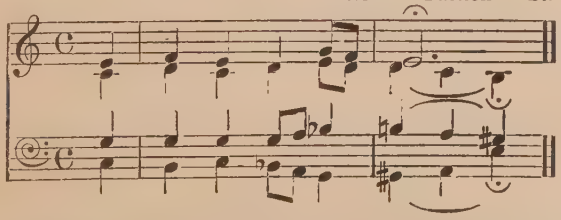
48.—It has been already noticed that three of the triads in a major key are minor triads (§16), and that two of the triads in a minor key are major triads (§17). Therefore, in harmonizing a melody in a major key, we use both major and minor triads; and in a minor key, minor and major triads. Also the triads of the tonic minor key (with the exception of the tonic triad) are often used as **chromatic triads** (*i.e.* requiring an accidental, but not involving modulation) in a major key, so that we might borrow some of the chords of C minor to assist us in harmonizing a melody in C major. The reason of this is (as we shall see later on) because these chromatic triads are fragments of fundamental discords (§89) in the key of the tonic.

49.—The **first chord** in a piece of music is, in the majority of cases, a chord of the tonic or the dominant, or, more rarely, the submediant (*e.g.*, Schumann's Novellette, No. 1, in F, which commences with the chord of D minor). Sometimes a fundamental discord (§89) is used instead of the ordinary tonic or dominant chord. (*See Appendix.*)

50.—The **last chord** must be a chord of the tonic in its root position, although Handel uses the subdominant chord at the close of his Utrecht Te Deum; Mozart concludes his variations upon "Une Fièvre Brûlante" with the first inversion of the tonic chord (§64); while numerous instances are to be found of minor movements terminating with the chord of the dominant, *e.g.*,

BACH—"Passion"—St. Matthew.

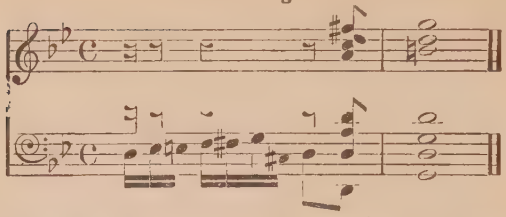
Ex. 15.



51.—Sometimes the last chord in a minor passage is that of the tonic major. This is called a **Tierce de Picardie,** and was a favourite conclusion with the older masters.

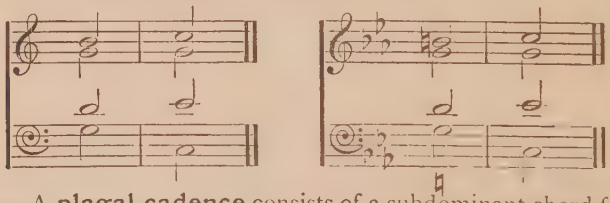
BACH—"Organ Fantasia in G minor." Vol. II.†

Ex. 16.

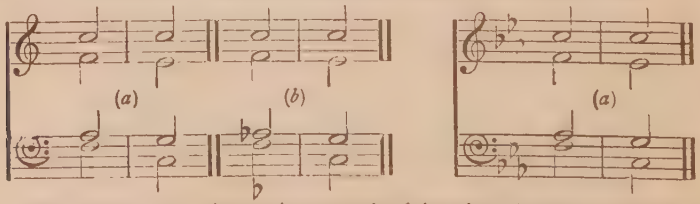


52.—The final and penultimate harmonies of a piece (or of a phrase) of music are termed **cadences** or **closes**. Cadences are of two kinds, **final** and **middle**, the former being used either at the end of a piece or at the end of a phrase, the latter being used at the end of a phrase only.

53.—Final cadences, also called **perfect cadences** or **full closes**, exist in two forms, known as the **authentic cadence** and the **plagal cadence.** The former consists of a dominant chord followed by a tonic. The tonic chord should fall upon an accented beat, and, when used at the end of a movement, should, if possible, have the tonic as a melody note. An authentic cadence in the key of a movement should only be used at the close of the latter, or so near to the beginning as not to convey the effect of a definite termination. Here follow authentic cadences in C major and C minor, the dominant chord in the latter key requiring an accidental :—

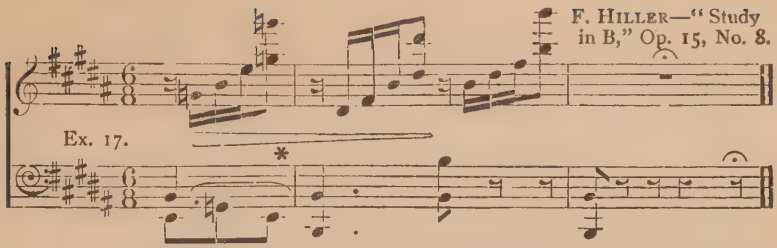


54.—A **plagal cadence** consists of a subdominant chord followed by a tonic (*a*). Sometimes, instead of the ordinary subdominant chord, the *minor* chord of the subdominant (§214) is employed in a major key (*b*). The plagal cadence generally follows the authentic (§53) at the end of a composition and is sometimes called the church close.

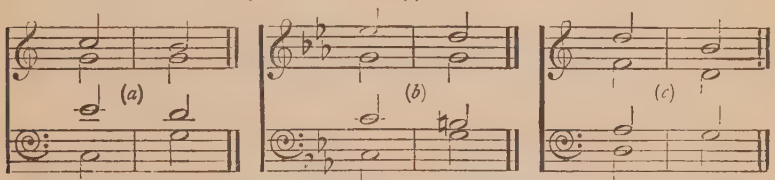


We give (Ex. 17) an interesting example of the minor chord of the subdominant used cadentially in a major key. The student will observe that the harmonies are the same whether expressed in arpeggio or in four-part chords.

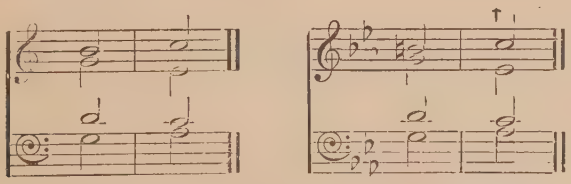
† Peters' Edition.



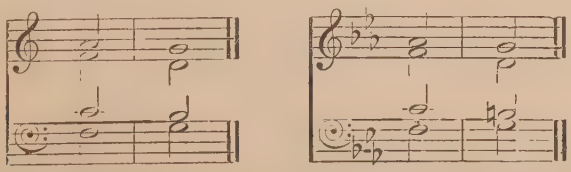
55.—Middle cadences are divided into three classes—imperfect, interrupted and mixed. Of these, the **imperfect cadence**, or **half close**, consists of a tonic chord followed by a dominant (*a*). It is the reverse form of the authentic cadence (§53), hence its name, and seems to ask a question. When in a minor key it is occasionally used as a final cadence (*b*), and in a major key it sometimes consists of a supertonic chord followed by a dominant (*c*).



56.—The **interrupted cadence**, also called the false or deceptive cadence, is formed when the dominant chord is followed by some other chord than that of the tonic, generally that of the submediant. This cadence, which was frequently introduced with telling effect by Handel towards the conclusion of some of his finest choruses, is the opposite of the plagal cadence (§54) in that it precedes rather than follows the authentic cadence.



57.—The **mixed cadence** is so called because it consists of a subdominant chord followed by a dominant, *i.e.* the first chord of the plagal cadence and the first of the authentic.

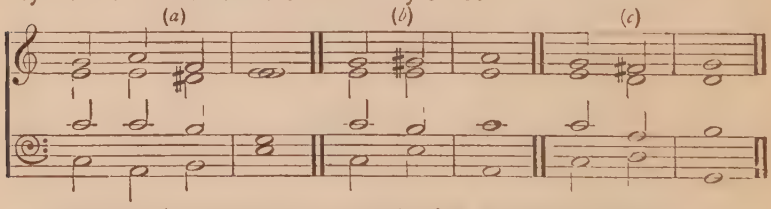


† Note the doubled major 3rd consequent upon the juxtaposition of the dominant and submediant triads (§42).

58.—The progression of the melody to be harmonized will always show the kind of cadence possible. Thus a melody terminating upon leading note and tonic, or supertonic and tonic, may be treated as an authentic cadence if at the end of a piece, or an authentic or an interrupted cadence if at the end of a phrase. Similarly a melodic progression from submediant to dominant, at the end of a phrase, indicates a plagal or mixed cadence; a progression from subdominant to mediant, a plagal cadence; from subdominant to supertonic, a mixed cadence; from dominant to mediant, an authentic or interrupted cadence; from tonic to leading note, an imperfect cadence, and so on.

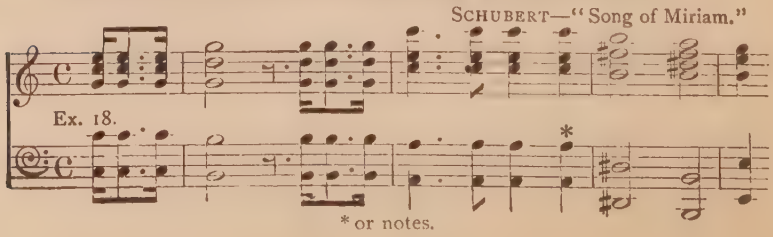
59.—The final chords of a phrase or melody which modulates must form a correct cadence in the new key. Generally speaking, *the sharpened 4th* of the original key *indicates a modulati n into the key of the dominant, the flattened 7th into that of the subdominant.*

60.—At least *two chords, a dominant and a tonic, are required to define a key.* Hence, in effecting a modulation (§38), our efforts must be directed to reaching the dominant, not the tonic, of the new key; the shortest way of doing this being to proceed from a chord in the original key to a chord common to both keys, and thence to the dominant of the new key (*a*); or, to reach the new dominant or a chord in the new key by chromatically altering a note* in a chord belonging to the original key (*b*). When the chord of the original key (§20) is common to both keys we can generally proceed direct to the new dominant (*c*). At *a* we have a modulation from C major to E minor, effected by approaching the dominant chord of the latter key from the chord of A minor, a chord common to both keys. At *b* a modulation from C major to A minor is effected by chromatically altering a note of a chord in the key of C, in order to make it form a part of the dominant chord of the new key. At *c* a modulation from C to G major is effected by proceeding directly from the chord of C which is common to both keys to the dominant chord of the key of G.



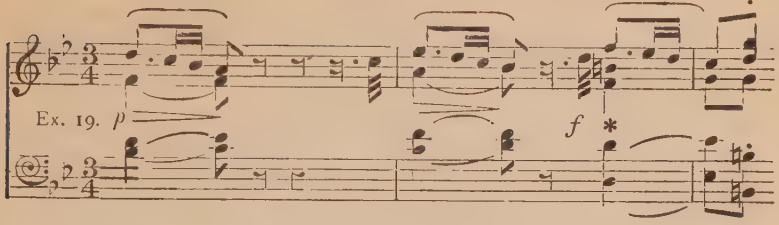
We now give some extracts confirming the above rules.

SCHUBERT—"Song of Miriam."

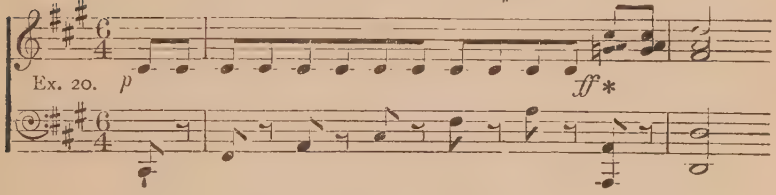


* or notes.

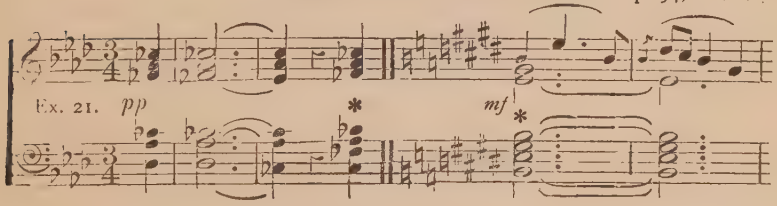
MOZART—"Pianoforte Fantasia in C minor."



MOSCHELES—"Study in F♯ minor." Op. 95, No. 12.



SCHUBERT—"Moments Musicaux." Op. 94, No. 6.



Ex. 18 shows a modulation from C major to E minor through the chord of A minor which is common to both keys. Ex. 19 shows a modulation from B♭ major to C minor by means of chromatic alteration, B♭ being changed into B♮ and thus made to form part of the dominant chord of C minor. Ex. 20 shows a modulation from F♯ minor to D major by proceeding direct from the chord of F♯ minor (which is common to both keys) to the dominant chord (A) of the new key. Ex. 21 shows a modulation from A♭ minor to E (*i.e.* F♭ major) by enharmonic change of the chord of F♭ (*i.e.* E♮) which is also common to both keys.

61.—In addition to the tonic major of a minor key and the tonic minor of a major key, *any key having the same signature, or one sharp or flat more or less than a given key, is said to be related to that key.** Hence, the **related keys to C major** would be C minor, A minor, G major, E minor, F major, and D minor; and the related keys to A minor would be A major, C major, E minor, G major, D minor, and F major.

62.—Modulation into related keys is termed **diatonic**; into unrelated keys, **chromatic** or **extraneous.** Other modulations will be explained in due course. (*Vide* Chaps. XI., XIV., XV. & XVII.)

* Less closely related are those keys which although altering the signature of the primary key (by the addition or subtraction of more than one sign) have tonics consonant with the latter; *e. g.* E♭, E, A♭, and A majors (not minors) are relatives of the second degree to C major; while C, C♯, F, and F♯ minors are similarly related to A minor.

Questions and Exercises on Chapter VII.

1.—Briefly enumerate some rules applicable to the harmonization of every melody.

2.—In proceeding from one triad to another, what progression of the bass is considered objectionable, and how may it be improved?

3.—To how many different triads may a given melody note belong?

4.—What triads could be used in harmonizing a melody in A major? Which of these would be primary and which secondary?

5.—What triad is usually forbidden in harmonizing a melody, and under what circumstances is it permitted to be employed?

6.—What triad should be avoided before or after a mediant triad?

7.—What is the best progression of roots?

8.—What triads are most free in their progressions?

9.—Can minor triads be used in a major key? and must the former always belong to the latter?

10.—What is meant by a chromatic triad?

11.—Is the dominant chord in a minor key a chromatic triad?

12.—Could the chord of G minor be used in harmonizing a melody in the key of D major?

13.—With what chords could a piece of music commence?

14.—What chords could be used to harmonize the first note of a melody commencing on the dominant of E♭ major, and one commencing on the tonic of the same key?

15.—Upon what chord should a piece of music end?

16.—What is a Tierce de Picardie?

17.—What is a cadence, how many kinds of cadences are there, and how is each kind subdivided?

18.—Give rules for the position and accentuation of the authentic cadence.

19.—What variations are sometimes introduced in the formation of the plagal and imperfect cadences?

20.—What is the most common form of the interrupted cadence, and in what way does it differ from the plagal cadence?

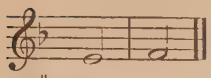
21.—What middle cadence is sometimes used as a final cadence?

22.—Why is a mixed cadence so called?

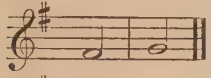
23.—State the different names by which some of the cadences are known.

24.—Write examples of all the final and middle cadences in several of the major and minor keys.

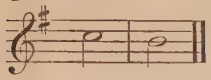
25.—Harmonize—



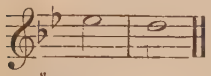
as the melody of (*a*) an authentic and (*b*) an interrupted cadence in F major, and (*c*) an authentic cadence in D minor.



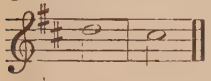
as the melody of (*a*) an authentic and (*b*) an interrupted cadence.



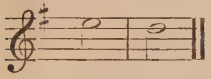
as the melody of (*a*) a plagal cadence in G major, and (*b*) in E minor.



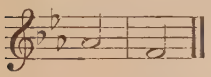
as the melody of (*a*) a plagal cadence in B♭ major, and (*b*) a mixed cadence in G minor.



as the melody of (*a*) an imperfect cadence in B minor, and (*b*) an imperfect and (*c*) a mixed cadence in D major.



as the melody of (*a*) a plagal cadence in G major, (*b*) an imperfect cadence (§55*c*), and (*c*) a mixed cadence in the same key.

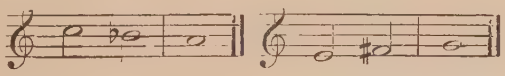


as the melody of (*a*) a mixed, and (*b*) an imperfect cadence.

26.—Find two suitable cadences wherewith to harmonize the dominant followed by the mediant in the key of F minor.

27.—How many and what chords define a key?

28.—What modulations will be implied by the following progressions, and why?



29.—Describe three of the shortest methods of modulation.

30.—What is a related key?

31.—What are the related keys to each of the major and minor keys? Write them out in a complete list.

32.—Define diatonic and chromatic modulation, and say by what other name the latter kind of modulation is known.

33.—From the chord of D major modulate to the keys of A and G majors, and E, F♯, B, and D minors, using not more than three or four chords in each example.

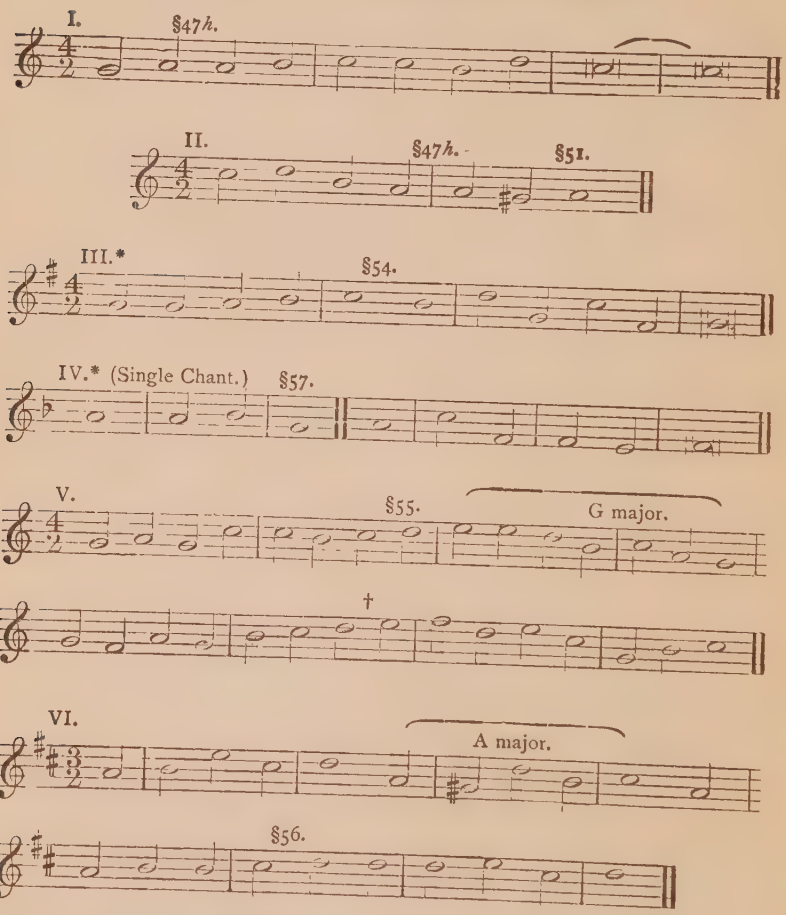
34.—From the chord of F major modulate to the keys of A major, B♭ minor, C minor, and D♭ major, using not more than three or four chords in each example.

35.—In common time would it be desirable to have the same chords on the second and third beats of the bar, or upon the fourth beat of one bar and the first of another?

36.—Upon what beats of a bar of $\frac{6}{8}$ time would it be undesirable to place repeated chords?

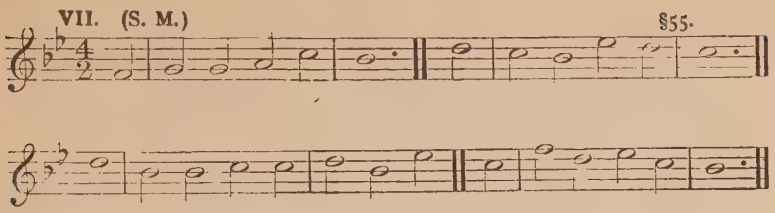
37.—Are the modulations shown in Exs. 18-21 to related or unrelated keys?

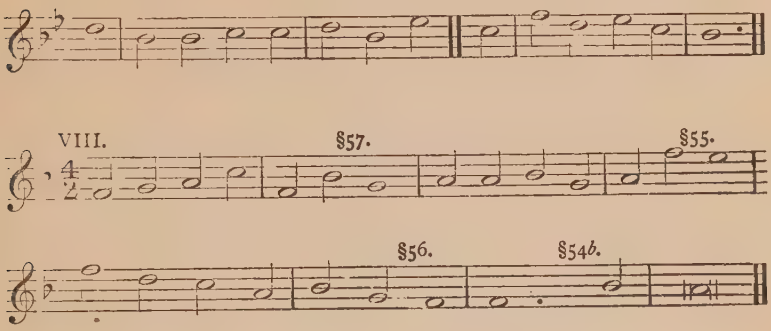
38.—Harmonize the following melodies in four parts:—

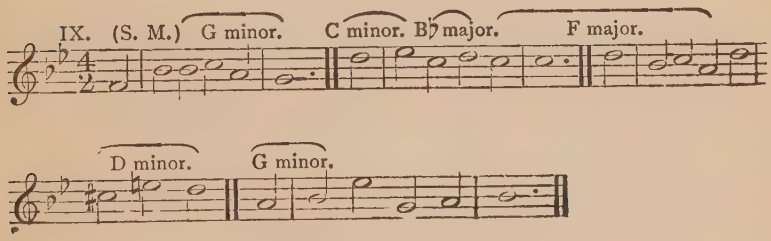


* III and IV are "changeable" or "convertible" melodies, *i.e.* such as can be sung in a major key or that of its tonic minor. The harmonies also can be made capable of similar transposition by using only tonic, subdominant, dominant, and submediant chords. When harmonized, write out melodies in both major and minor keys.

† Use the authentic cadence here, the effect of finality being destroyed by the 3rd of the tonic in the melody.


VII. (S. M.)
§55.


VIII.
§57.
§55.
§56.
§54b.

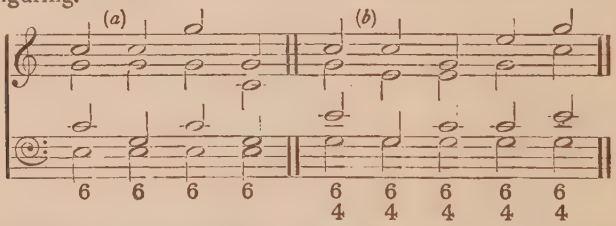

IX. (S. M.)
G minor.
C minor.
B♭ major.
F major.
D minor.
G minor.

CHAPTER VIII.

The Inversions of the Diatonic Triads.

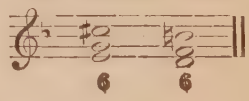
63.—A chord is said to be *inverted* when its root (§11) is not in the bass, the number of inversions of which a chord is capable being always one less than the number of the notes it contains

64.—A triad (§11) or common chord (§14) contains three notes, and is therefore capable of *two* inversions, the *first* **inversion**, when the 3rd from the root is in the bass, and the *second* **inversion** when the 5th from the root is so placed. Hence, the root of a first inversion is a 3rd below the bass, and that of a second inversion a 5th below. As in the root position of common chords, so in the inversions, doublings do not alter the character of the inversion (which is determined entirely by the particular note of the chord to be found in the bass), nor are doublings or the particular octave in which any interval occurs specified in the figuring.

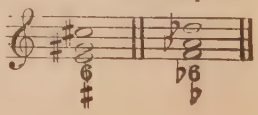


The chords at *a* would, therefore, be all first inversions of the chord of C, because they contain no other notes than C, E, and G, and have E, the 3rd from the root, in the bass. They would also be figured 6, because they contain a 6th and a 3rd from the bass note, it being understood in this case that 6 implies a 3. Similarly the chords at *b* are second inversions of the common chord of C (§20), and would be figured $\frac{6}{4}$ because they contain a 6th and a 4th from the bass note, and because (§22) in figuring basses the highest figure is always placed uppermost. These observations, and others to be made in the course of this chapter, apply with equal force to both major and minor common chords.

65.—**A line drawn through any figure** was formerly understood to imply that the note indicated by that figure was to be raised one semitone, whether by a ♮, ♯, or **x**. The line is now only used to refer to the 6th from the bass.

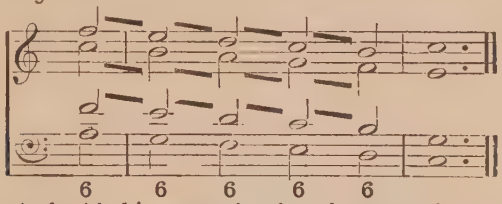


66.—When the 3rd from the bass note of a first inversion requires to be accidentally lowered or raised a semitone, an accidental without a figure attached (as in the root position of a common chord §24) is placed below the 6, *e.g.*,

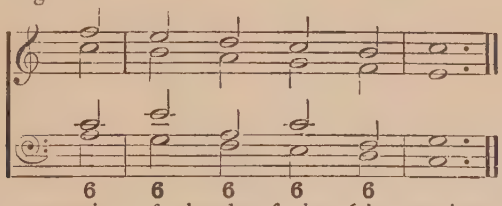


67.—On account of its being so figured, the first inversion of a common chord is often termed the **chord of the 6th**; and the second inversion, the **chord of the 6th and 4th,** or the **chord of the $\frac{6}{4}$.** *

68.—In chords of the 6th, the rules for doubling are precisely the same as those given in §26 for the root position of the common chord;† *but the same note should not be doubled in consecutive chords of the 5th,* or consecutive 5ths and 8ves will ensue.



Here the root is doubled in every chord, and consecutives are continually produced. This difficulty is best overcome by *doubling alternately the root and 5th,* or failing that, the root and 3rd, carefully avoiding the doubled leading note.

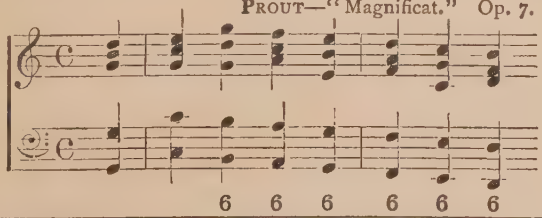


N.B.—In a succession of chords of the 6th, as above, the 6th is generally placed in the melody.

We now give an example showing the alternate doubling of the root and the 3rd in chords of the 6th, and also insert one from Handel, in which the doublings are not according to the generally recognised rule. The student should ascertain for himself the root of each chord and the particular interval doubled.

PROUT—"Magnificat." Op. 7.

Ex. 22.



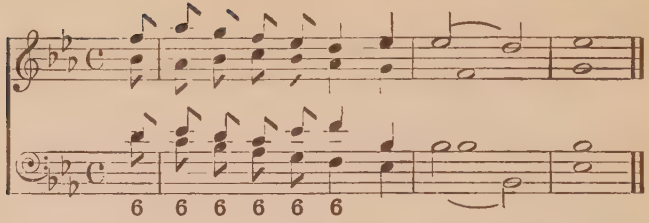
* The first inversions of the triads on every degree of the major and minor scale, except that of the mediant in the minor key, are treated as concords, *i.e.*, do not require preparation (§74), are free in their progression (§9) subject to the rules given in §68, may succeed each other in any order, and be used alternately with common chords in root position.

† *i. e.* double the root; failing this the 5th or the minor 3rd from the root; but avoid doubling the major 3rd from the root, and never double the leading note except as stated in §37, or when the first inversion of the dominant triad is followed by some chord other than the tonic, as at the beginning of Ex. 23. The 5th from the root is doubled more frequently in the first inversion of a common chord than in the root position.

‡ The alternate doubling of root and 3rd is most frequently found in ascending consecutive chords of the 6th.

HANDEL—"Belshazzar."

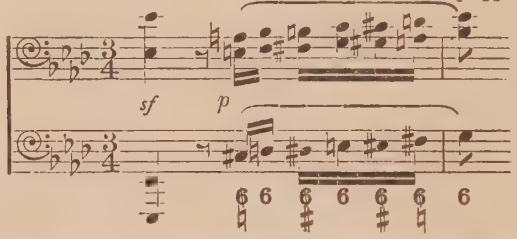
Ex. 23.



Successions of chromatic 6ths are by no means uncommon in instrumental music, *e.g.*,

CHOPIN—"Polonaise in A♭." Op. 53.

Ex. 24.



69.—But *in the second inversion of a common chord the best note to double is the bass, i.e.* the 5th from the root, because in this case the root is the 4th from the bass, and *a 4th from the lowest part is looked upon as a dissonant interval* in harmony. This fact explains the prominence given in this and the following chapter to rules anent the treatment and progression of the $\frac{6}{4}$.

70.—Guided by the principle that the leading note must not be doubled (§§ 26 & 37), the following rules will suffice for the securing of correct doublings in the inversions of the dissonant triads (§12).

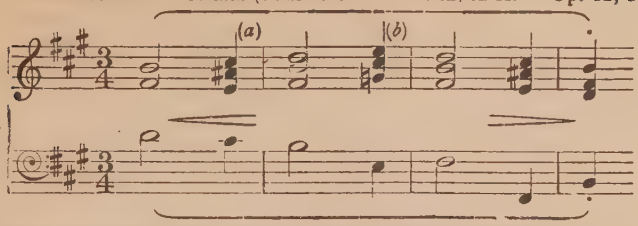
TRIAD.	INVERSION.	NOTE TO BE DOUBLED.
Diminished (on 7th of major or minor scale).	1st.	3rd or 5th from primary bass.*
Diminished (on supertonic of minor scale).	1st.	primary bass or 3rd from primary bass.*
Augmented.	1st.	3rd from primary bass.*
Augmented.	2nd.	3rd from primary bass.*

The reasons for the above rules will be seen and duly given hereafter (§102), (§187), (§224).

* Later on we shall see that the leading note of a major scale, the leading note and supertonic of a minor scale, and the mediant of a minor scale are not really the roots of the dissonant triads they bear. We shall therefore allude to these notes as primes or primary basses, to distinguish them from roots or radical basses, and a dissonant triad having its primary bass in the lowest part will be said to be in its primary position.

BEETHOVEN—"Sonata (Pianoforte and Violin) in A." Op. 12, No. 2.

Ex. 25.

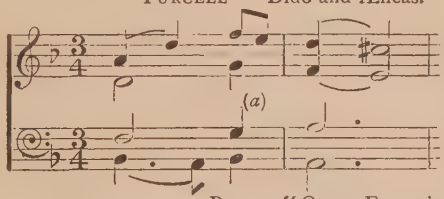


At *a*, the 3rd from the primary bass of the diminished triad on the leading note of B minor (the key of the passage) is doubled; at *b*, the 3rd from the primary bass of the diminished triad on the supertonic of the same key.

71.—The *second inversion of a diminished triad is rarely used* in four-part harmony except as a passing note (§123), as at *a*, Ex. 26, or in a sequence (§§ 37 & 38), as at *b*, Ex. 27.

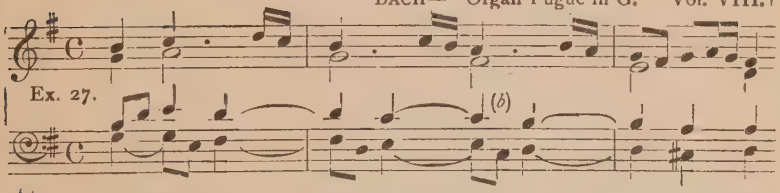
PURCELL—"Dido and Æneas."

Ex. 26.



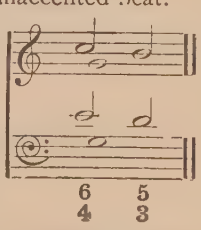
BACH—"Organ Fugue in G." Vol. VIII.†

Ex. 27.



72.—A $\frac{6}{4}$ is frequently followed by a $\frac{5}{3}$ upon the same bass. This progression, which generally occurs upon an accented beat, is called a **cadential** $\frac{6}{4}$ (§78*b*). A $\frac{6}{4}$ followed by a chord upon another bass is termed a **passing** $\frac{6}{4}$, and generally occurs upon an unaccented beat.

73.—In a cadential $\frac{6}{4}$ *the* 6 *should go to* 5, *the* 4 *to* 3, *and the bass note be doubled*:—



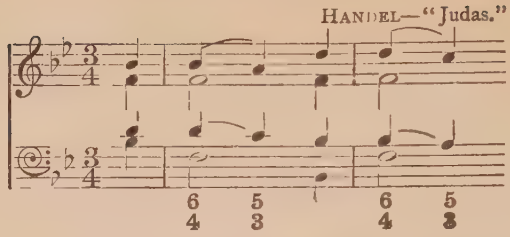
Observe that the common chord in the accompanying example is figured, in accordance with what was said in §23*a*. The doubling of the bass in a cadential $\frac{6}{4}$ should rarely be placed in the upper part, as it would be likely to render the melody monotonous.

We give an example of a cadential $\frac{6}{4}$, and examples of passing $\frac{6}{4}$s will be found in Ex. 27 and in the exercises at the end of the chapter.

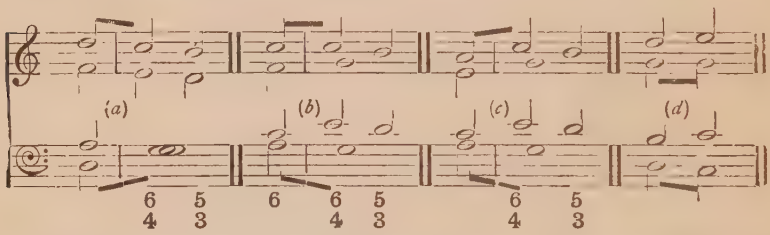
† Peters' Edition.

HANDEL—"Judas."

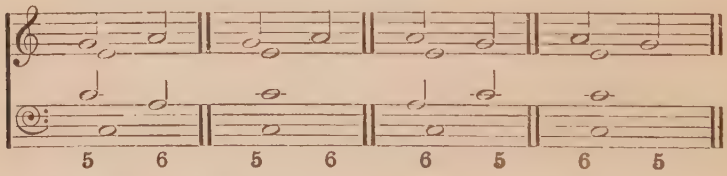
Ex. 28.



74.—The 4th in a $\frac{6}{4}$ making a dissonant interval *should be approached and quitted conjunctly, and,* if possible, *in contrary motion with the bass* (*a*). Failing this, it should be *prepared, i. e.* heard as a consonant note, in the same part in the previous chord (*b*). If approached by skip, it should be in contrary motion with the bass (*c*), and it should be quitted by oblique motion with the bass when contrary motion is not possible (*d*).



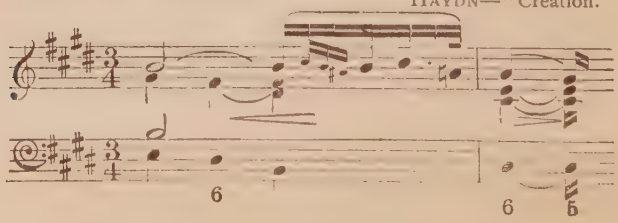
75.—Sometimes a common chord, when in its root position, is followed by a chord of the 6th (§67) upon the same bass or *vice versâ.* As both chords contain a 3rd, the progression is indicated by the figuring 5 6 or 6 5, which means that 5 goes to 6 or 6 to 5, while the 3rd and (generally) the 8ve remain stationary.



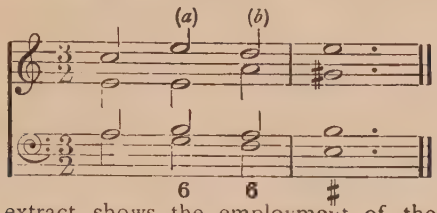
The following is an example of a 6 5 over the submediant:—

HAYDN—"Creation."

Ex. 29.

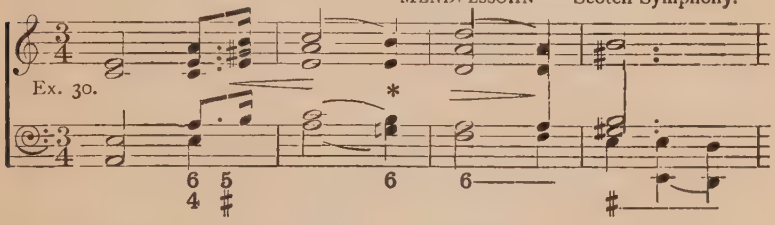


76.—The real dominant chord in a minor key is, as stated in §18, a major chord, but occasionally we meet with the *first inversion* of a dominant minor chord (*a*).* This is often used in the formation of what is termed the *Phrygian cadence*, a form of the mixed cadence (§57) in which the subdominant chord (*b*) is found in its first inversion, *e.g.*,



The following extract shows the employment of the chord at the commencement of a movement.

MENDELSSOHN—"Scotch Symphony."



It will be observed that in these two examples the *minor 7th* of the minor scale is used in the bass and between the tonic and submediant.

QUESTIONS ON CHAPTER VIII.

1.—When is a chord said to be inverted?

2.—Of how many inversions is a chord capable?

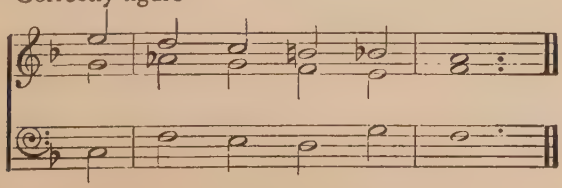
3.—How many inversions are possible in the case of a triad or common chord?

4.—How can you ascertain whether a chord is in its first or second inversion, and how do you determine the root of a first or second inversion?

5.—Give the figuring of the inversions of the common chord.

6.—How are chords of the 6th denoted when containing (*a*) a sharpened 6th or (*b*) an accidentally altered 3rd?

7.—Correctly figure



* See note to §174.

8.—Give the various names by which first and second inversions of common chords are known.

9.—What note or notes may be doubled in (*a*) the first inversion of a common chord, (*b*) the second inversion of the same, and (*c*) a succession of chords of the 6th?

10.—In what kind of a progression are consecutives most likely to occur?

11.—Give rules for doublings in the first inversions of the diminished and augmented triads.

12.—What positions of the diminished triads are generally avoided in four part harmony?

13.—What is the mental effect of a $\frac{6}{4}$? Why is this, and how does it affect its treatment?

14.—Distinguish between a passing and a cadential $\frac{6}{4}$, and say upon which part of a bar the latter should be placed.

15.—In a cadential $\frac{6}{4}$ what intervals from the bass are the best to place in the melody?

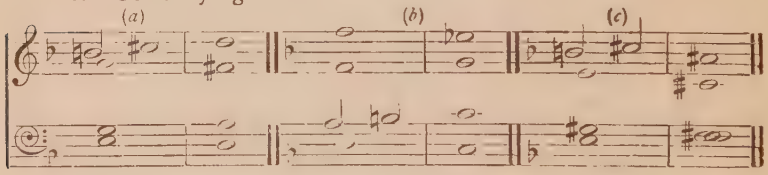
16.—Give rules for approaching and quitting the 4th in a second inversion.

17.—What progression is understood, and what intervals are implied by the figurings 5 6 and 6 5?

18.—What is a Phrygian cadence, and what chord enters into its formation?

19.—To what mode is this cadence peculiar?

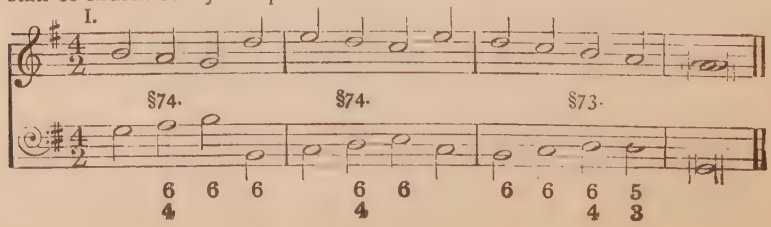
20.—Correctly figure:—



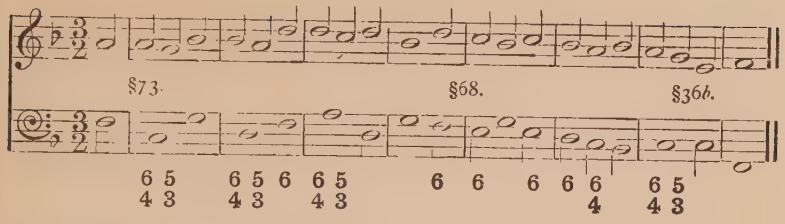
21.—In consecutive chords of the 6th what interval is usually placed in the upper part?

Exercises on Chapter VIII.

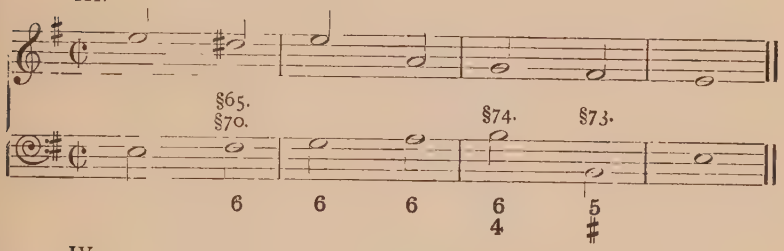
N.B.—The root of every inversion should be written on a separate staff or indicated by a capital letter.



II.



III.



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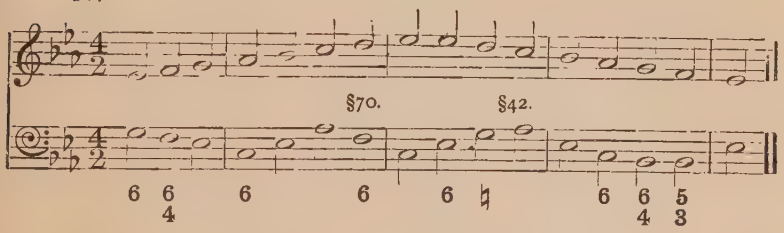
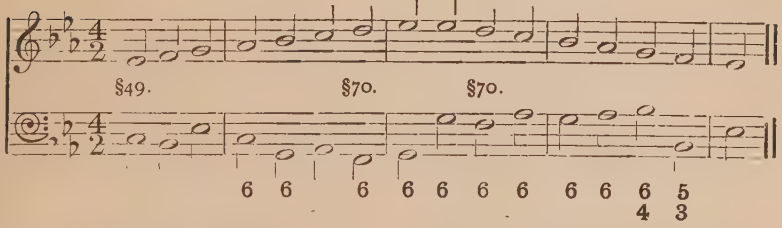
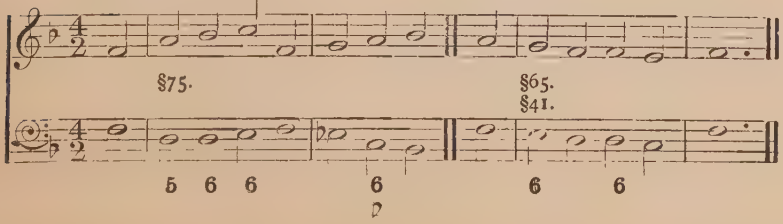
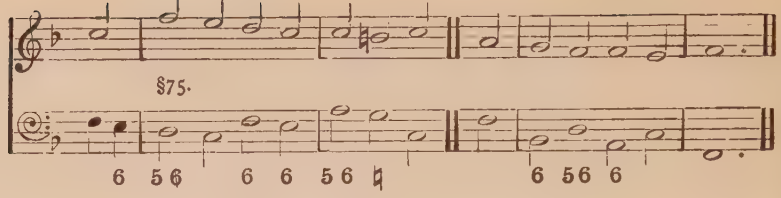


V.

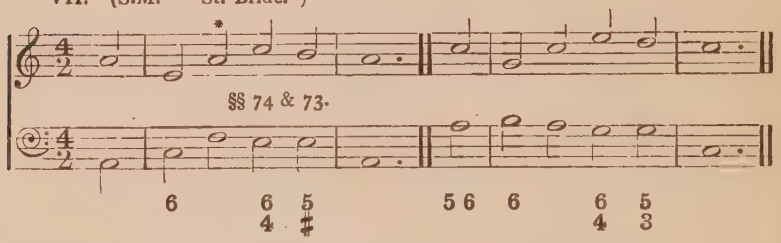


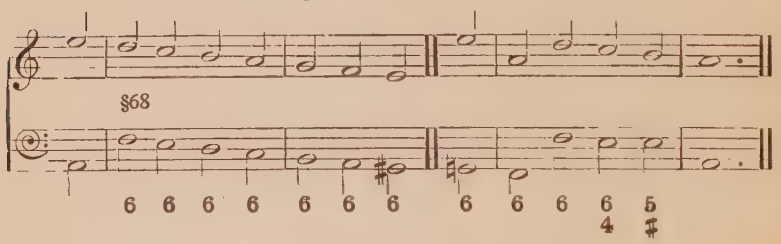
VI. (C.M.—"Dundee.")



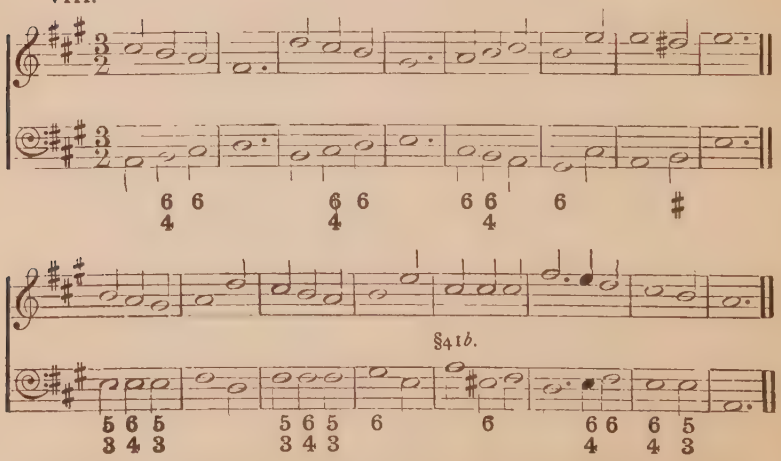


VII. (S.M.—"St. Bride.")

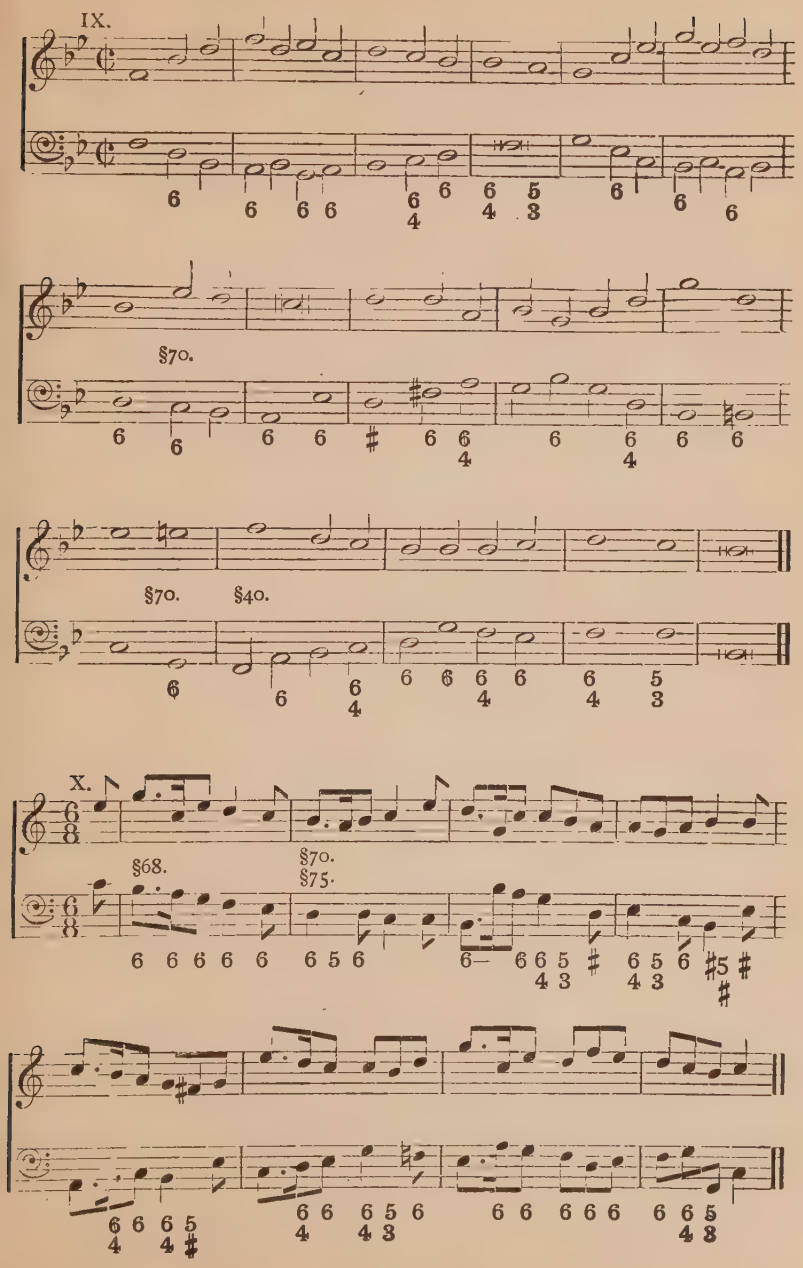


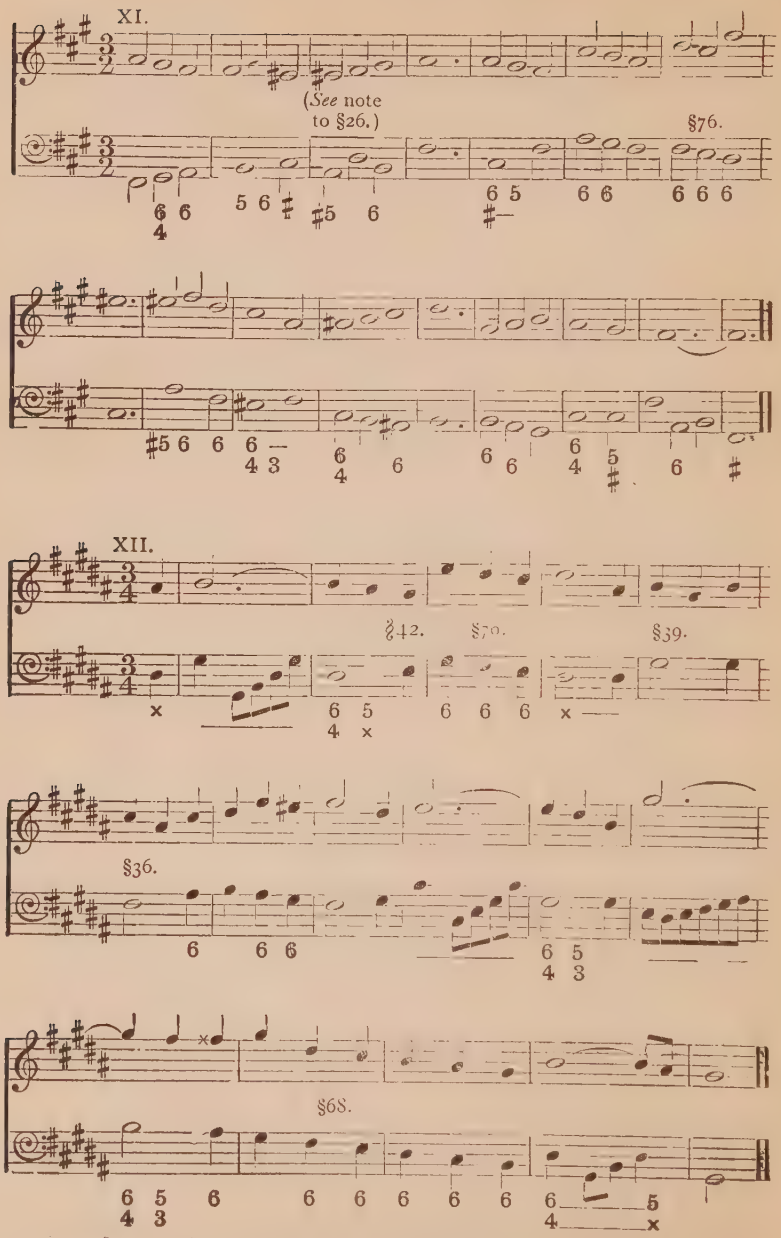


VIII.



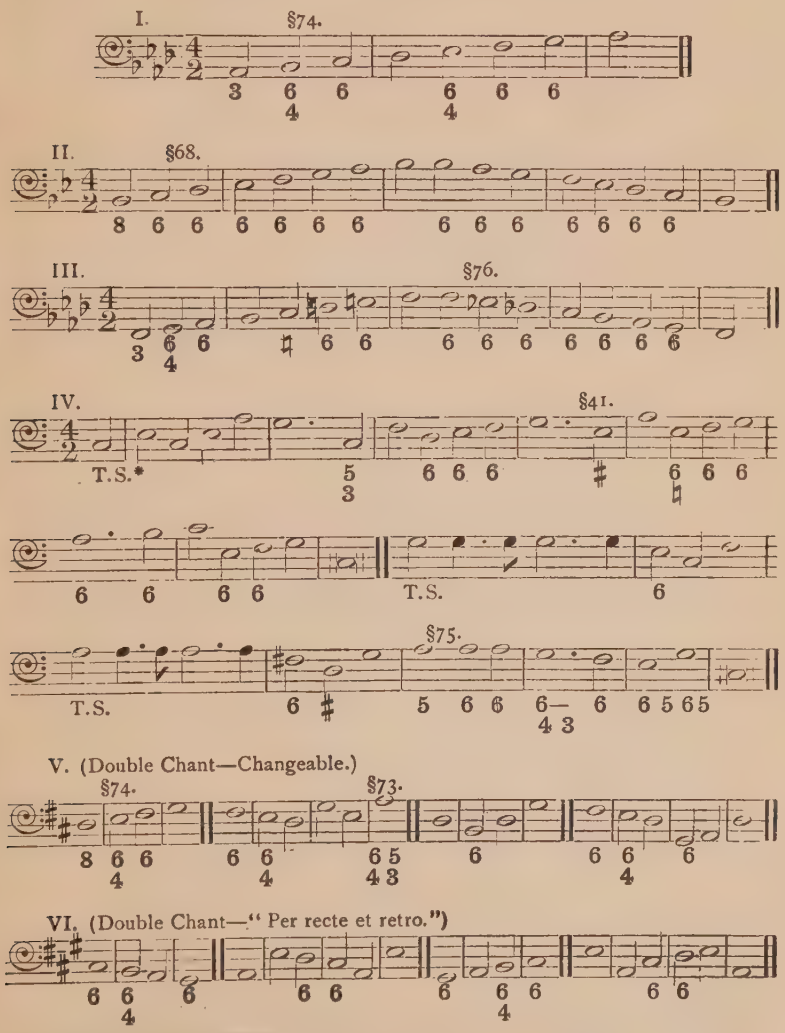
* Doubled major 3rd.


IX.
§70.
§70.
§40.
X.
§68.
§70.
§75.



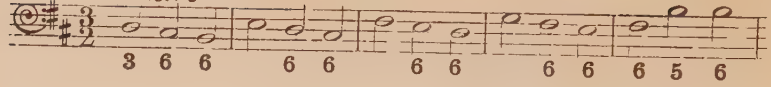
Note.—The × signifies that the 3rd of this chord must be a double sharp.

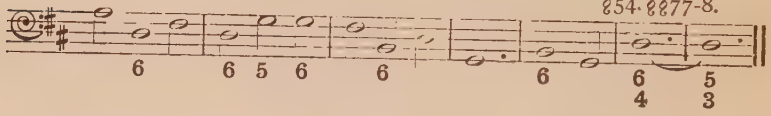
In the following exercises three upper parts are to be added to the given figured bass. The rules relating to hidden consecutives (§44) should be carefully borne in mind. The figure underneath the first chord of every exercise should be regarded as a conventional indication of the particular interval to be placed in the melody.



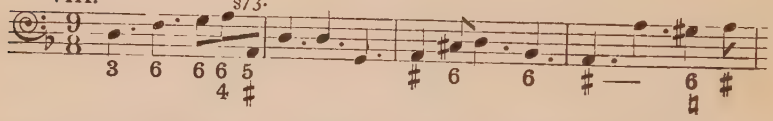
* T.S.—Tasto solo, *i.e.*, the upper parts to be in unison or 8ves with the bass (§32*a*) until figures occur.

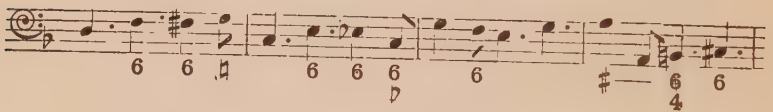
VII. §§37, 38.



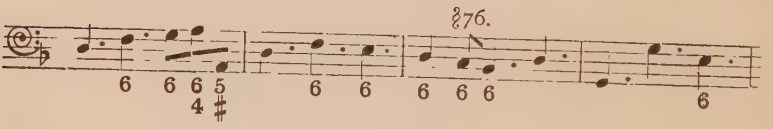


VIII. §73.

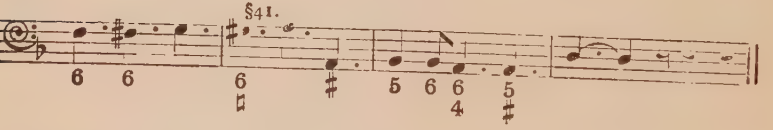




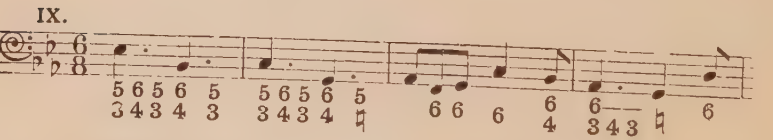
§76.

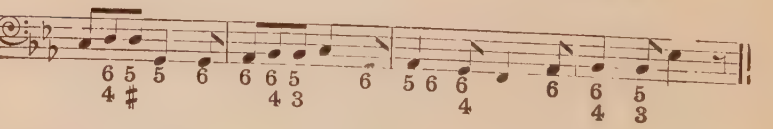


§41.

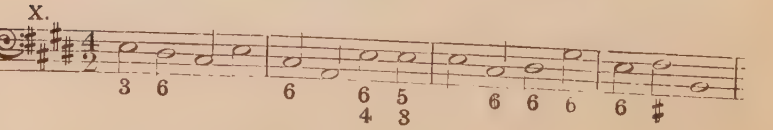


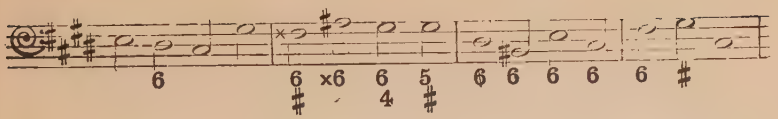
IX.

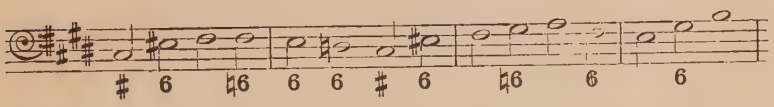


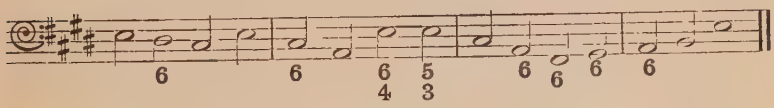


X.

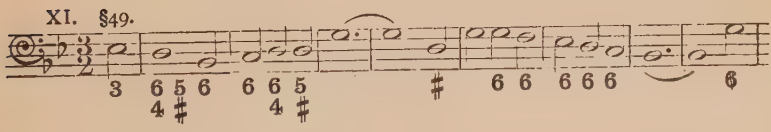




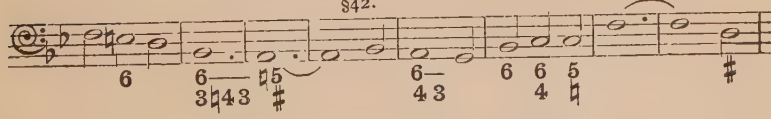




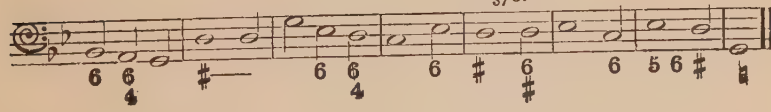
XI. §49.



§42.



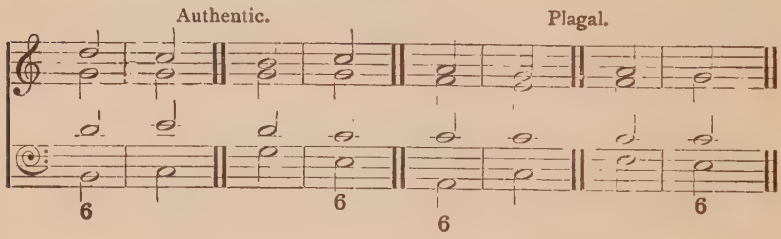
§70.

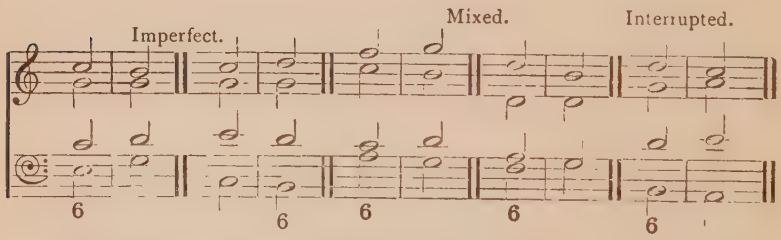


CHAPTER IX.

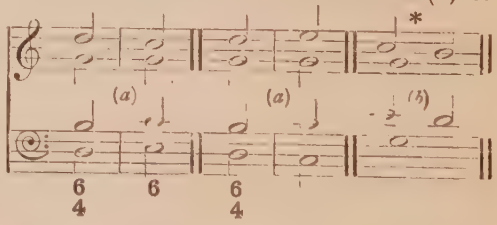
On the Use of Inverted Triads in Harmonizing a Melody.

77.—When, in any of the cadences described in Chapter VII., the final or penultimate chord is used in its first inversion (§64), we have what is known as an **inverted cadence.**





78.—Sometimes the penultimate chord in the authentic (*a*) or imperfect (*b*) cadence (§§53, 55) is used in its *2nd inversion* (§64), *e.g.*, Inverted cadences can only be used at the end of phrases, the final cadence in a piece of music being, with but few exceptions, an uninverted perfect cadence. When used as a final cadence, the last chord of an inverted cadence must be in its root position.



79.—A fragment of melody which proceeds conjunctly (§30) can generally be treated as the upper part of a series of chords of the 6th, as in Exs. 22 & 23.

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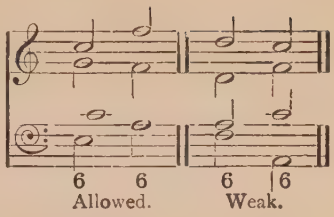
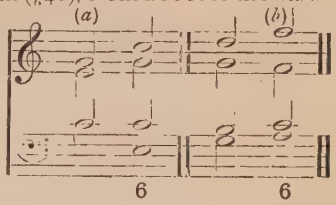
* From this example the student will see the meaning of the expression "cadential" ♩ (§72).

80.—While successive chords of the 6th (*i.e.* chords of the 6th on conjunct basses) have a pleasing effect, *consecutive chords of the 6th on disjunct basses should be avoided*, unless between inversions of primary triads (§20).

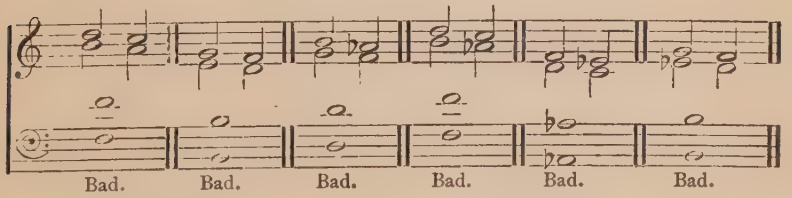


81.—The descent of a major or minor 6th (§46), from a root to the bass of its first inversion, is freely admitted (*a*). *When roots descend a 2nd, the second chord should generally be in its first inversion* (*b*), except when the dominant chord is preceded by the submediant.



82.—In a major key *the* $\frac{6}{4}$ *on the subdominant should be avoided* as being the second inversion of the diminished triad (§71). For similar reasons *chords of the* $\frac{6}{4}$ *should not be placed upon the subdominant and submediant of a minor key.** All other degrees of the major and minor scales may bear a $\frac{6}{4}$, and *a chord of the 6th* (§67) *may be placed upon any degree of a major or of a minor scale.*

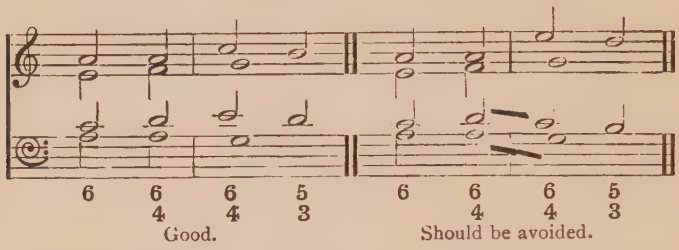
83.—*A cadential* $\frac{6}{4}$ (§72), which is allowed on the tonic, supe tonic, mediant, dominant, and submediant of a major scale, and on the tonic, dominant, and (rarely) mediant of a minor scale *should be avoided on the subdominant and the leading note of a major scale*, on the subdominant for reasons given in the preceding section, and on the submediant because the resulting $\frac{5}{3}$ would be the primary position (see note to §70) of the diminished triad, which is rarely used except in sequential passages. For one or the other of these reasons, *cadential* $\frac{6}{4}$*s are forbidden on the supertonic, the subdominant, the submediant, and the leading note of a minor scale.*



84.—A $\frac{6}{4}$, being practically a discord (§69), cannot end a movement (§10), and should be avoided at the beginning or the end of phrases.

* These and subsequent restrictions do not apply to sequences (§38) and chords formed by passing notes (§123).

85.—Consecutive second inversions are only allowed between those positions of the supertonic and tonic chords (*i.e.*, second inversions on the submediant and dominant), as in the following example, and between second inversions of the dominant and subdominant chords (*i.e.*, $\frac{6}{4}$ chords on the supertonic and tonic). In both these cases consecutive 4ths should be avoided (*vide* §257*b*).

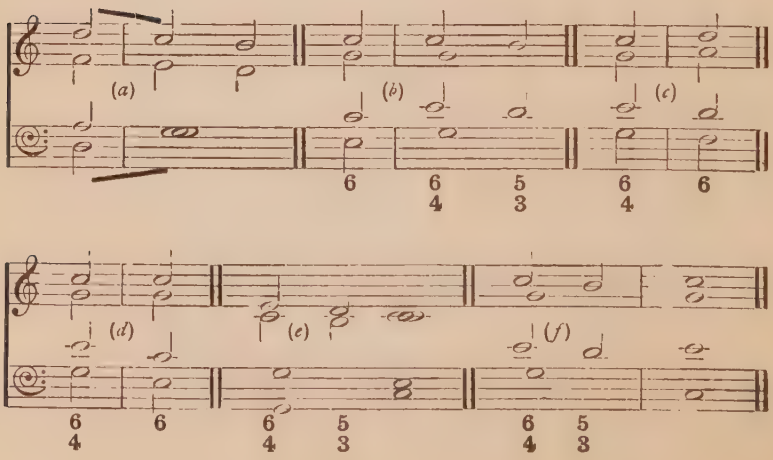


86.—In addition to the rules given in §74 for the treatment of the 4th in the chord of the $\frac{6}{4}$, we must carefully observe that—

(I.)—*The bass of a* $\frac{6}{4}$ should be *approached conjunctly*, unless preceded by the root position of another chord (*a*), or any position of the same chord (*b*).

(II.)—*The bass of a* $\frac{6}{4}$ must be *quitted conjunctly* (*c*), or (if on an accented beat) be followed by a $\frac{5}{3}$ on the same bass, unless it be succeeded by another position of the same chord (*d*).

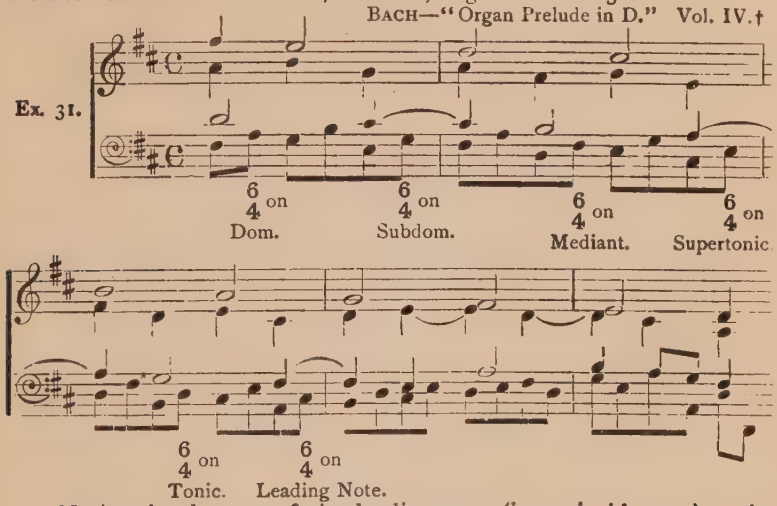
(III.)—A melody descending conjunctly (at the close of a phrase) from mediant to tonic, or having for its last three notes the tonic and leading note followed by the tonic, can always be harmonized as a $\frac{6}{4}\,\frac{5}{3}$ on the dominant followed by the tonic chord (*e*, *f*).



We will now give some examples confirming the rules laid down in §§82-86. Our first extract shows a sequence containing a $\frac{6}{4}$ on every degree of a *major* scale except the somewhat rare second inversion on the submediant. This chord, however, is given in Ex. 32.

BACH—"Organ Prelude in D." Vol. IV.†

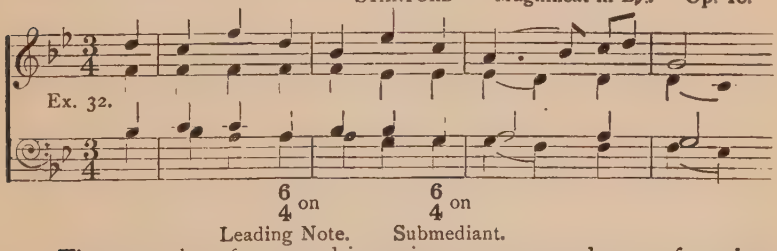
Ex. 31.



Notice the descent of the leading note (in an inside part) at the cadence.

STANFORD—"Magnificat in B♭." Op. 10.

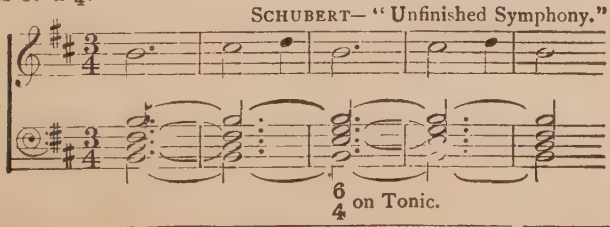
Ex. 32.



The examples of a second inversion upon every degree of a *minor* scale will be given separately, and reference will be made to these examples in order to confirm the rules given in §86 for the treatment of the bass of a $\frac{6}{4}$.

SCHUBERT—"Unfinished Symphony."

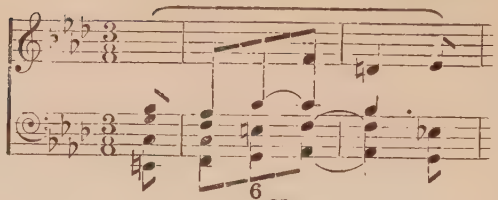
Ex. 33.



† Peters' Edition.

MENDELSSOHN—"1st Organ Sonata."

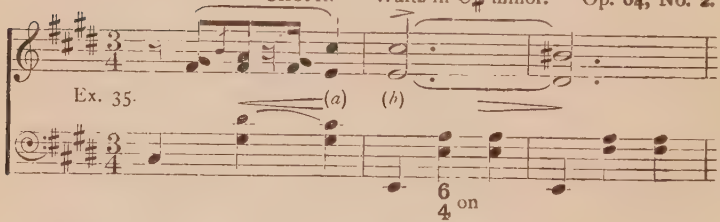
Ex. 34.



$\frac{6}{4}$ on Supertonic (F minor).

CHOPIN—"Waltz in C♯ minor." Op. 64, No. 2.

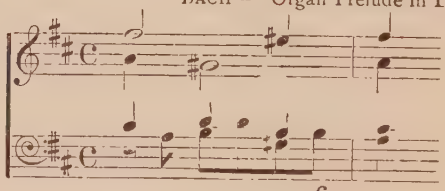
Ex. 35.



$\frac{6}{4}$ on Mediant.

BACH—"Organ Prelude in D." Vol. IV.‡

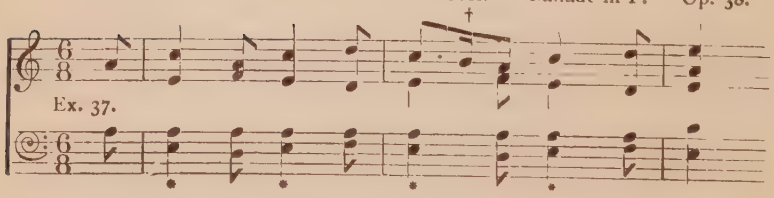
Ex 36.



$\frac{6}{4}$ on Subdominant (F♯ minor).

CHOPIN—"Ballade in F." Op. 38.

Ex. 37.



* $\frac{6}{4}$ on Dominant (A minor).

(a) By the use of the pianoforte pedal, the C♯ at the commencement of this bar is made to sound throughout the bar. Hence the last chord sounds as if in its root position.

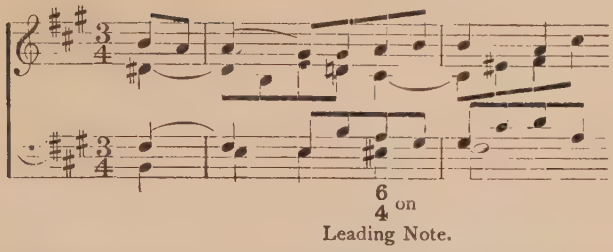
(b) This chord is really a second inversion, the 4th (supplied in the following chord) being understood.

† Note the consecutive 5ths made by the passing note in the melody.

‡ Peters' Edition

MENDELSSOHN—"Elijah."

Ex. 38.

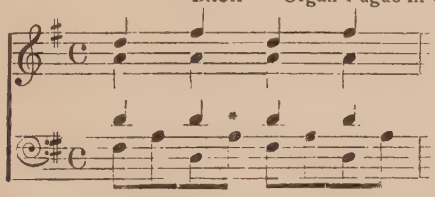


An example of a $\frac{6}{4}$ on the submediant has already been given in Ex. 26.

The student should now observe that in Exs. 31 and 36 the bass of the $\frac{6}{4}$ is approached by leap from another position of the *same* chord. In Ex. 35 it is approached by leap, and in Ex. 34 conjunctly, from the root position of *another* chord; in Exs. 32, 37, and 38 it is approached conjunctly from root positions and inversions of other chords. In all the above examples the bass remains stationary or is quitted conjunctly, but an example of a $\frac{6}{4}$ leaping to another position of the same chord will be seen in the following Exercise:—

BACH—"Organ Fugue in G." Vol. IV.†

Ex. 39.



In Exs. 32 and 33 the $\frac{6}{4}$ is approached and quitted upon the same bass. (*See Appendix.*)

QUESTIONS ON CHAPTER IX.

1.—What is an inverted cadence, and where may, and where may it not be used?

2.—When are consecutive chords of the 6th effective, and when objectionable?

3.—What have you to remark about the second of two chords, the roots of which descend a 2nd?

4.—Upon every degree of the scale of F♯ minor write a chord of the 6th, and give its root* and figuring.

5.—Make a list of allowed and objectionable $\frac{6}{4}$s in the keys of E♭ major and E♭ minor.

---

* Or primary bass (see note to p. 36) in the case of dissonant triads.
† Peters' Edition.

6.—In the keys of D major and D minor show what cadential $\frac{6}{4}$s are allowed or forbidden.

7.—In the cadential $\frac{6}{4}$ upon the supertonic and subdominant of a minor scale is there any objectionable point other than that of employing objectionable positions of the diminished triad?

8.—Why is the $\frac{6}{4}$ a discord, and how does this fact limit its uses?

9.—When are consecutive $\frac{6}{4}$s allowed and by what restrictions are they governed?

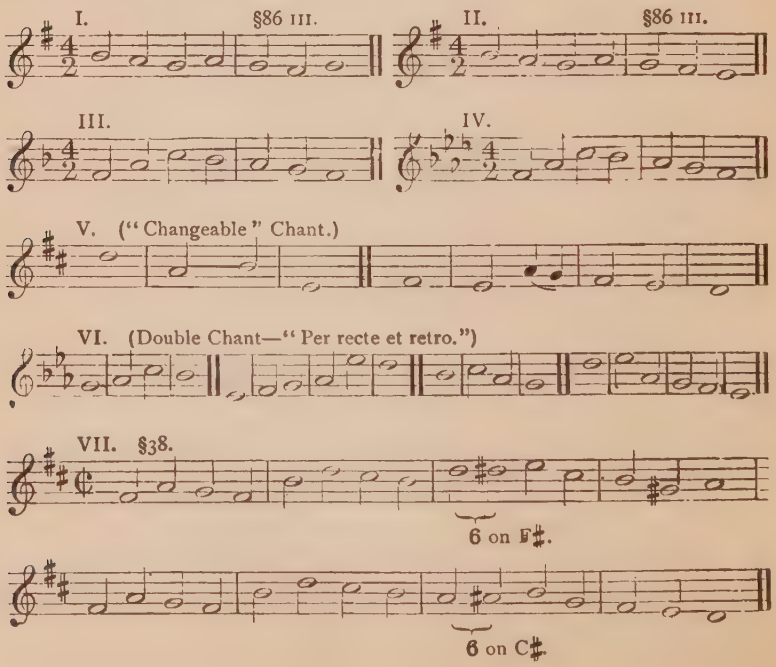
10.—Give rules for approaching and quitting the bass of a $\frac{6}{4}$, and give examples of these rules in the key of A.

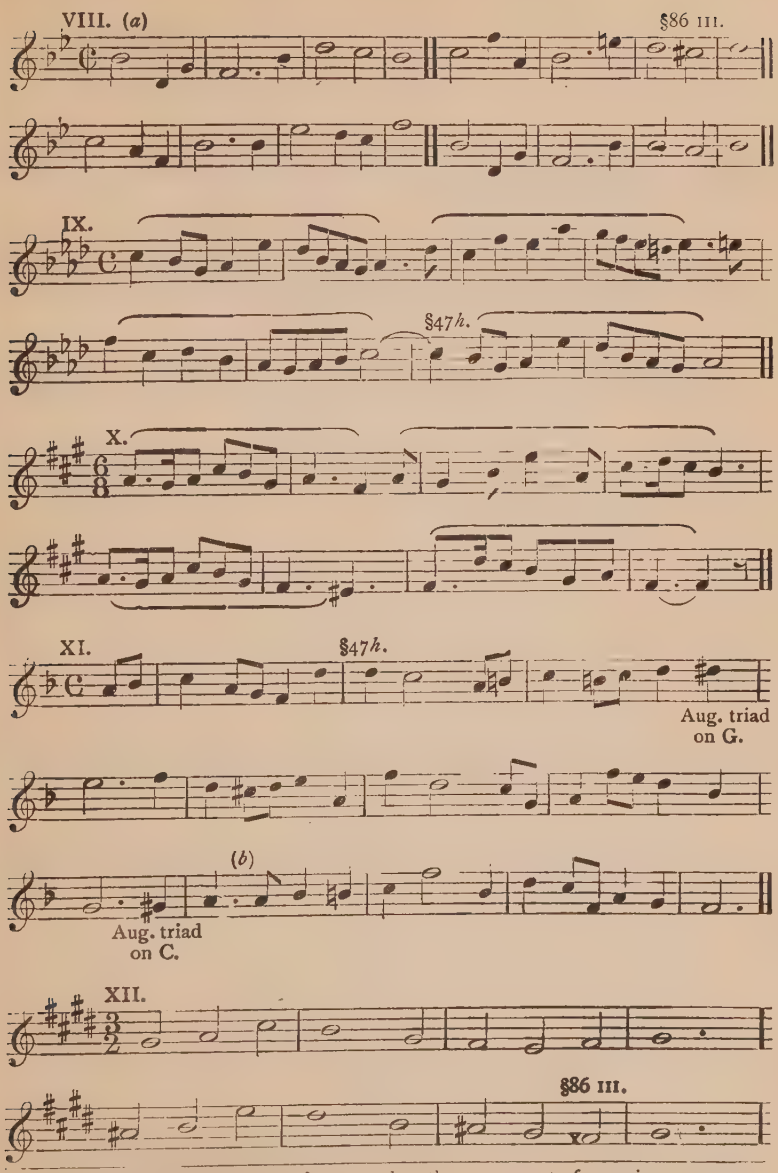
11.—Under what circumstances may a cadential $\frac{6}{4}$ on the dominant be employed in harmonizing a melody?

12.—What cadence is formed by the insertion of a $\frac{6}{4}$ $\frac{5}{3}$ at the conclusion of a phrase?

Exercises on Chapter IX.

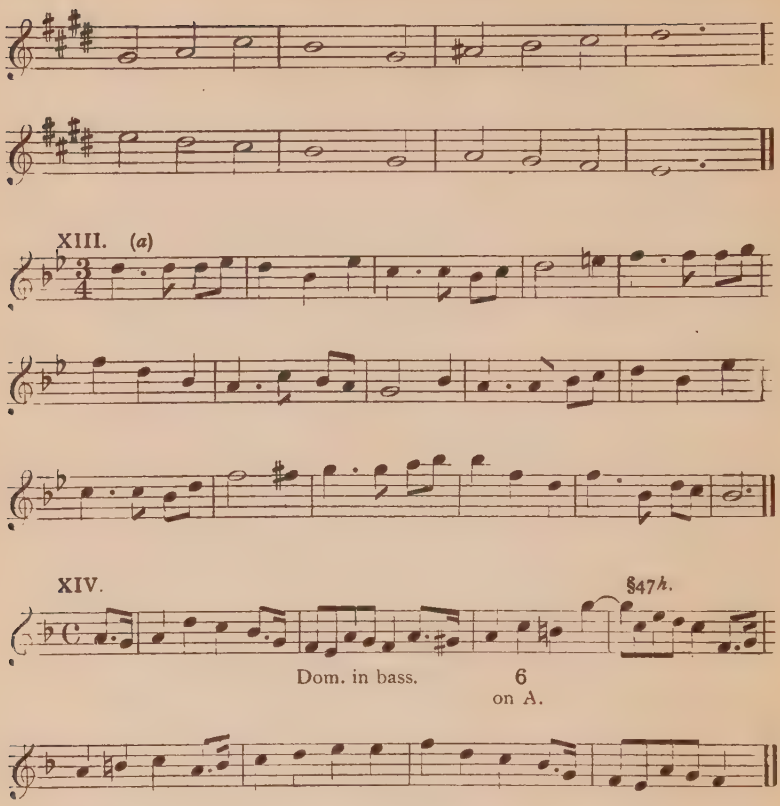
N.B.—In harmonizing the following melodies the basses should be figured and the roots of the chords indicated by a capital letter, as in the preceding exercises.





(*a*) The first four notes may be treated as the upper part of an unison passage.

(*b*) Change the harmony upon the second beat, so that one or more parts **move while the melody sustains.**



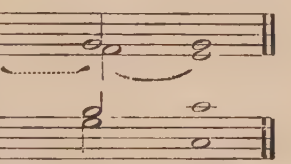
Further melodies can be selected by the student from simple hymn tunes, chants, or other vocal or instrumental music of not too elaborate a character.

(a) The harmony or the position of the chord is to be changed upon the second beat of the bar.

CHAPTER X.

The Chord of the Dominant Seventh.

87.—Although the common chord in its root position is the only perfect concord (§15), we have said in our note to §67 that the first inversion of the common chord is treated as a concord, while the second inversion partakes of the nature of a discord. In the present chapter we begin the study of the other chords used in harmony, all of which (at least in their complete forms) are discords. Discords, as we have already remarked (§§8-10), not only differ from concords as regards their mental effect, but require *resolution*, and, very frequently, *preparation* also. We have, in §74, defined *preparation* as the sounding of a dissonant note as a consonant note in the same part in a previous chord. The *percussion* of a discord is the sounding of the chord containing the dissonant interval or intervals. The *resolution* of a discord is the progression of the dissonant note to a note consonant in the chord following, *e.g.*,



Preparation. Percussion. Resolution.

Very frequently one discord is resolved into another discord rather than into a concord, and thus the feeling of finality is postponed to any length of time the composer may desire, it being understood that the last discord must resolve into a concord in order to bring the musical phrase to a satisfactory conclusion. The percussion and resolution of a discord are supposed to occur in the same part, but in instrumental music this rule is frequently disregarded. (*See Appendix.*)

88.—When a dissonant note cannot or need not be prepared, it should, as a rule, be approached conjunctly, and, if possible, *all unprepared dissonances should be approached by contrary or oblique motion.* With the exception of such particular cases as we shall deal with in subsequent chapters, notes dissonant with the root or with the primary bass (see note to §70) resolve by *descending one degree.*

89.—All discords, except suspensions and retardations,* and those formed by passing (§123) or auxiliary notes (§127), are termed **fundamental discords** (a name given to them by some theorists because consisting of notes whose names are to be found among the harmonics†

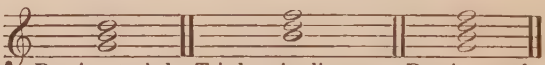
* *Vide* Chapter XIII.

† Harmonics are sounds of higher pitch which are present (and in some cases distinctly audible) in almost all musical tones. Their vibration frequency per second is an exact multiple of the vibration number of their fundamental tone, prime or generator.

of the fundamental tone on which the chords are built), and have for their roots either the *tonic*, the *dominant*, or the *supertonic* (*i.e.* the dominant of the dominant or second dominant). Sometimes a discord has *two* roots,* the tonic and dominant, or the dominant and supertonic. By far the most important of the fundamental discords are those founded upon the dominant (hence the reason for the name given to the 5th of the scale), and of these the most common and the most useful is the **chord of the dominant seventh.**

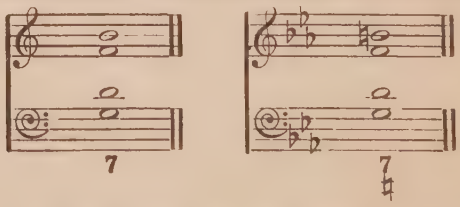
90.—This chord is formed by adding another 3rd above the dominant triad. The new 3rd must, of course, be in conformity with the key signature, and will then be found to be a minor 7th from the dominant. Hence the chord is sometimes called the chord of the dominant *minor* 7th. It consists of the dominant, its *major* 3rd, *perfect* 5th and *minor* 7th, *i.e.* the dominant, leading note, supertonic, and sub dominant of a major or a minor scale. A so-called chord of the 7th can be placed upon any degree of the scale, but these 7ths, sometimes called *secondary* or *non-dominant* 7ths (Chap. XVIII.), differ from true dominant 7ths in the quality of their intervals, some having minor 3rds, others diminished or augmented 5ths, others major or diminished 7ths, and so on.

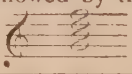
91.—One important feature in the construction of the chord of the dominant 7th is that it contains the triad on the dominant of a given scale combined with that on the leading note, and hence the latter is considered as a fragment of the dominant 7th (§14), *e.g.*,



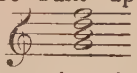
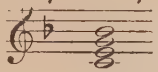
Dominant triad. Triad on leading note. Dominant 7th.

92.—In §18 we noted that the triads on the 5th and 7th degrees of a major and its tonic minor scale were identical, and as the dominant 7th is formed from these two triads, it follows that *the dominant 7th must also be identical in any major key and its tonic minor.* Such is indeed the case, and, accordingly, the simplest method of modulation from any major key to that of its tonic minor, or *vice versâ*, is to employ the chord of the dominant 7th which is common to both keys.

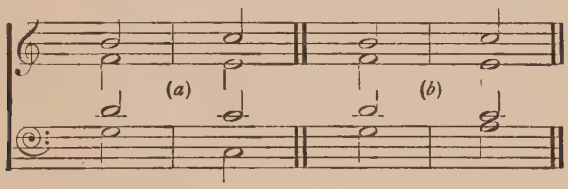


93.—The third and most important point in connection with the dominant 7th is that, followed by the chord of the tonic, it *definitely determines the key*, *e.g.*,  regarded as a diatonic chord

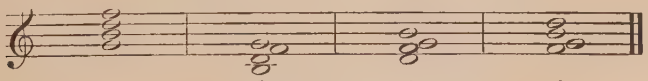
* *Vide* Chapter XVII.

could only belong to C major or C minor, for all other keys would have either F♯ or B♭. Great care must be taken to distinguish between the dominant 7th *in a given key* and the dominant 7th *on a given note.* The former would be built upon a note a 5th above the key note, the latter would have its key note a 5th below its root, *e.g.*,  which is the dominant 7th *in* C, would have G for its *root*, but the dominant 7th *on* C  would have F for its *tonic.*

94.—*A dominant 7th generally resolves upon the chord of the tonic, or upon that of the submediant*, according to the rules to be given later on. In the first case it forms (when occurring at the end of a phrase or of a movement) an authentic cadence (*a*), in the second case an interrupted or false cadence (*b*).*



95.—The chord of the dominant 7th, having four notes, is capable of three inversions (§63), *e.g.*,



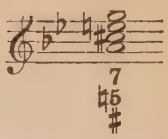
7	6 5	4 3	4 2
Root position.	1st Inversion.	2nd Inversion.	3rd Inversion.

The nature of their intervals, and the intervals implied by the figuring, may be learnt from the following table :—

FORM.	BASS NOTE.	INTERVALS FROM BASS.	FIGURING.	INTERVALS IMPLIED.
Root position.	Dominant.	Major 3rd, perfect 5th, minor 7th.	7	5th & 3rd.
1st inversion	Leading note.	Minor 3rd, diminished 5th, minor 6th.	6 5	3rd.
2nd inversion.	Supertonic.	Minor 3rd, perfect 4th, major 6th.	4 3	6th.
3rd inversion.	Subdominant.	Major 2nd, augmented 4th, major 6th.	4 2	6th.

* *Vide* §109.

Of course the implied intervals are indicated in the figuring when they require accidentals, *e.g.*,



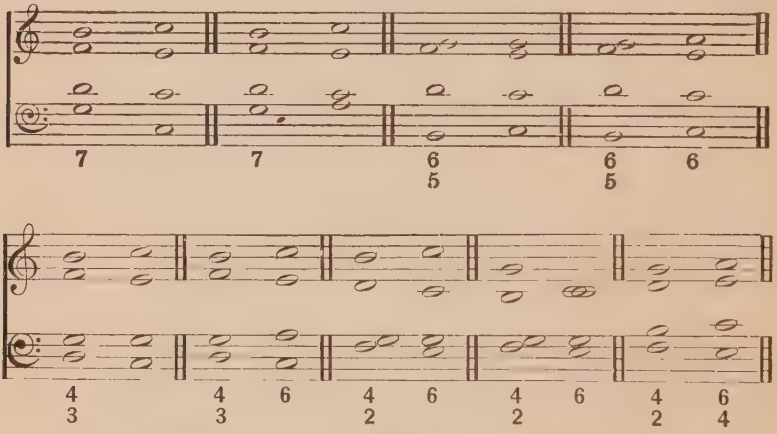
96.—Being the least pungent of all discords, the dominant 7th *need not be prepared* unless it be deemed desirable to do so, but it *must always be resolved.* This is usually effected in the following manner :—

(*a*) The *7th*, being the only interval dissonant with the root, *descends* one degree (§88).

(*b*) The *3rd*, being the leading note, ascends to the tonic (§36).

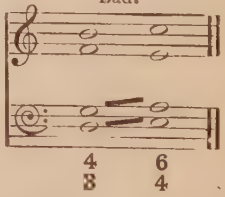
(*c*) The *5th may ascend or descend* one degree, or it may leap to the dominant

(*d*) The *root* in the inversions *remains stationary* or, as in the root position, *it may be followed by the tonic or the submediant.**



The second inversion of the dominant 7th is rarely, if ever, followed by the second inversion of the submediant chord, on account of the consecutive 4ths which would thereby be produced (§85). The above examples show the resolution of the dominant 7th upon the tonic or submediant triads. Other resolutions are frequently to be met with, and sometimes necessitate a slightly different progression of the various parts. See §100.

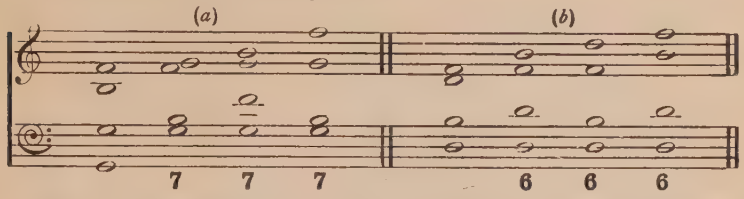
Bad.



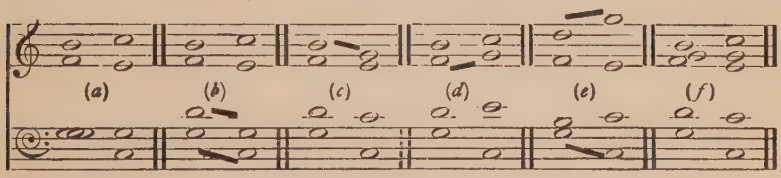
97.—The 3rd of a dominant 7th, having a compulsory progression, cannot be doubled without producing consecutive 8ves ; the same remark applies to the seventh, with the exceptions stated in §§101*d*, 105*b*.

* By this time it will be evident to the student that the root of a first inversion of any fundamental discord is a 3rd below the bass ; of a second inversion a 5th below the bass ; and of a third inversion a 7th below the bass.

The 5th and root, however, can be and frequently are doubled, the 5th being omitted in four part harmony when the root is doubled (*a*), and the root when the 5th is doubled (*b*).

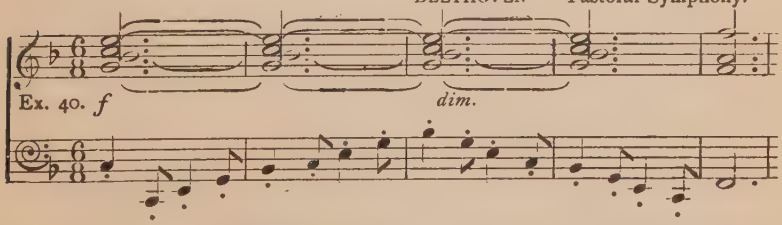


98.—The *omission of the 5th* is generally made with the view of securing a complete chord of the tonic (*a*), which would otherwise be impossible apart from forbidden or objectionable progressions (*b*, *c*, *d*, *e*), unless in five parts (*f*).

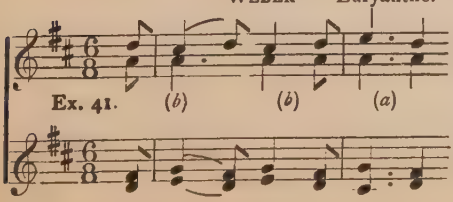


The following examples should now be carefully studied. The first contains a dominant 7th in its first, second and third inversions as well as in its root position, thus showing that one position of a discord may be followed by another, or one discord resolved upon another discord (as stated in §87), provided the last discord (in this case the root position of the dominant 7th) is duly resolved. The other examples show the various inversions of the dominant 7th resolved upon the tonic chord and are duly explained below.

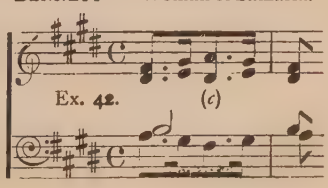
BEETHOVEN—"Pastoral Symphony."



WEBER—"Euryanthe."

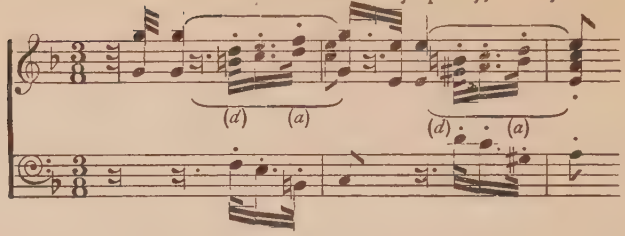


BENNETT—"Woman of Samaria.



BEETHOVEN—"Symphony, No. 1, in C."

Ex. 43.

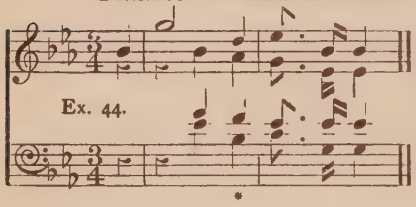


At *a* in Exs. 41 and 43 we have the first inversion of the dominant 7ths in the keys of D, C, and A minor, resolving upon their respective tonics. Exs. 41 (*b*) and 42 (*c*) show the second inversions of dominant 7ths in the keys of D and E. In Ex. 41 the 5th descends to the tonic, in Ex. 42 it rises to the mediant.

The following examples illustrate the resolution of the dominant 7th (in its root position and in its third inversion) upon the submediant chord :—

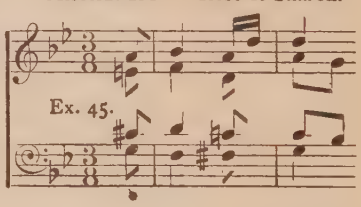
BENNETT—"Woman of Samaria."

Ex. 44.



MACKENZIE—"Rose of Sharon.'

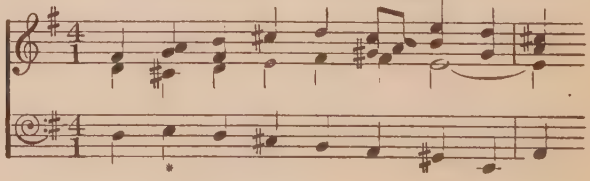
Ex. 45.



Another example of the root position of the dominant 7th resolved upon the submediant chord in the keys of C♯ minor and F♯ minor will be found in the 5th and 6th chords of Ex. 11. The first and second inversions are rarely resolved upon the submediant. We give an example of the latter in the key of D.

MENDELSSOHN—"Organ Fugue, No. 2, in G.

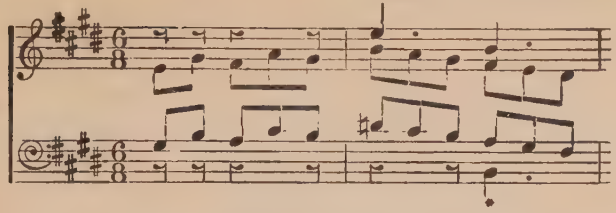
Ex. 46.



99.—Occasionally the 3rd in the chord of the dominant 7th may be omitted (§28), the root (or 5th) being doubled.

BENNETT—"The Lake."

Ex. 47.

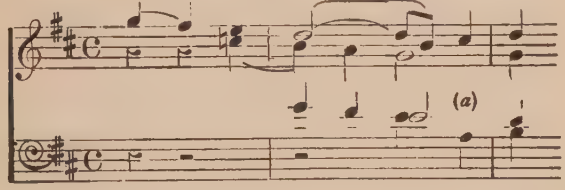


Here we have the dominant 7th in E major with the 3rd omitted and the root doubled. It is obvious that the omission of the 3rd can only take place in the root position and in the second and third inversions of the dominant 7th, because the first inversion has the 3rd in the bass.

100.—In addition to being resolved upon the tonic and submediant, the dominant 7th in its root position and second inversion is not infrequently resolved upon the subdominant chord, the 7th from the root remaining stationary. (*See Appendix*)

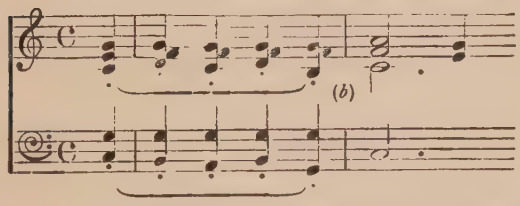
BRAHMS—"Triumphlied." Op. 55.

Ex. 48.



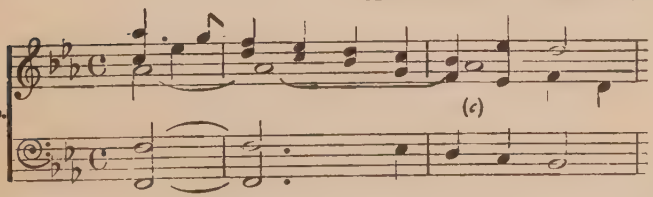
SCHUBERT—"Unfinished Sonata."

Ex. 49.



MENDELSSOHN—"Psalm xiii."

Ex. 50.

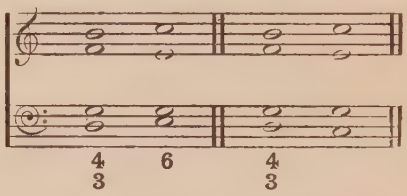


At *a* we have the root position of the dominant 7th resolving upon the first inversion of the subdominant chord. At *b* the resolution is upon the second inversion of the latter. At *c* we have the first inversion of

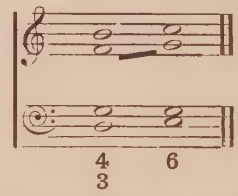
the dominant 7th resolving upon the first inversion of the subdominant. This resolution is rare, and that of the second and third inversions still more rare.

101.—The *second inversion of the dominant 7th*, when followed by the tonic chord, admits of various forms and resolutions :—

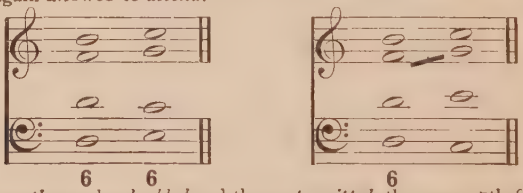
(*a*) The *5th* from the root being in the bass may *ascend to the mediant* or *descend to the tonic*, producing a tonic chord in its first inversion or in its root position



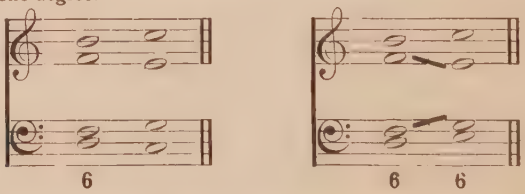
(*b*) When the bass note ascends the *7th* is also allowed to *ascend* (§96*a*), in order to avoid the doubled 3rd from the root as shewn in the second chord of the first of the preceding examples.



(*c*) The *bass note* (the 5th from the root) may be *doubled*, the root being omitted, and the *7th* again allowed to *ascend*.



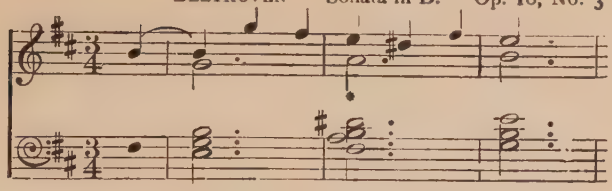
(*d*). The *7th* may be *doubled* and the *root omitted*, the upper 7th falling and the lower rising one degree.



The particular cases alluded to in §101*a* have already been illustrated in Exs. 42 and 41. In Ex. 51 we have an illustration of §101*b*. Exs. 52 and 53 illustrate §101*c*, *d*, and require no further explanation. The student should be able to ascertain the roots of the chords for himself, and also the key, should that be contrary to the signature. (*See Appendix.*)

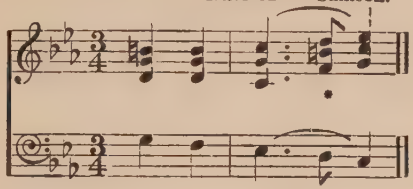
BEETHOVEN—"Sonata in D." Op. 10, No. 3

Ex. 51.



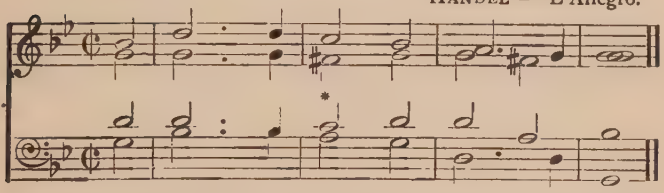
HANDEL—"Samson."

Ex. 52.



HANDEL—"L'Allegro."

Ex. 53.



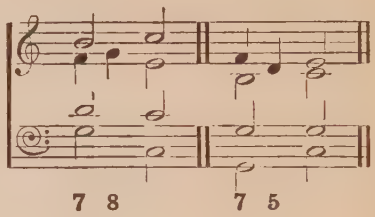
102.—From §101*c*, *d*, it will be seen that the first inversion of the diminished triad on the leading note is merely the second inversion of the dominant 7th with the root omitted, the 5th from the root being doubled when followed by the first inversion of the tonic chord, the 7th when followed by the tonic chord in its root position. This diminished triad is the first example we have as yet noticed of a chord with its root omitted. The real root of the diminished triad on the leading note is not the 7th of the scale, but the dominant; hence our reason for terming the former note the prime or primary bass of the triad it bears.

103.—By the older masters, especially Handel, the root was generally omitted in second inversions of the dominant 7th, the resulting chord, with either doubled 5th or 7th, being known as the *chord of the 6th on the supertonic.* An instance of Handel's rare employment of the $\frac{6}{3}$ will be found in the second bar of his chorus "But thanks be to God" ("Messiah").

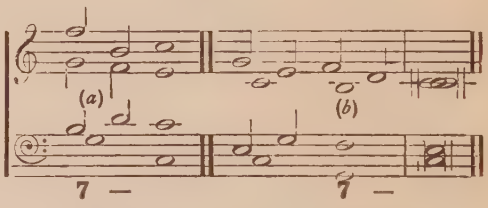
104.—The second inversion of the diminished triad on the leading note being the last inversion of a dominant 7th with the 7th doubled and the root omitted, and as the 7th in a chord of the dominant 7th is not generally doubled except in the second inversion, we now see why the second inversion of a diminished triad was considered objectionable in four parts (§71). With the 5th from the root (6th from the bass note) doubled, the chord is less objectionable, and it may be freely used in three parts as no doubling is then required.

105.—For the purposes of modulation (§38) the dominant 7th may be resolved in a number of different ways, some of which will be given in subsequent chapters and exercises. But, in addition to these, there are, in more or less common use, several irregular resolutions which we will now proceed to explain.

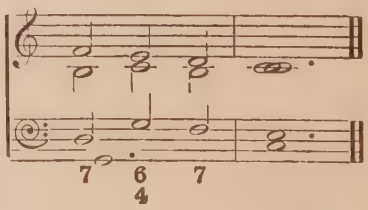
(*a*) The *7th* in a dominant 7th may be *ornamentally resolved, i.e.*, followed by some other note of the chord before falling to its note of resolution. Observe in the above figuring that both 7 8 and 7 5 imply a 3.



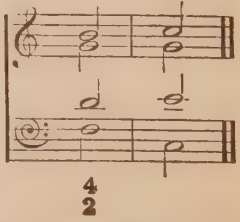
(*b*) Sometimes the *7th* is *transferred from one part to another*, and finally resolved in the part in which it last occurs (*a*). This licence sometimes allows the 7th to be doubled (*b*). It should be carefully remembered that the ornamental resolution of a dissonant note and its transference from one part to another are features common to most of the fundamental discords (§89), and by no means peculiar to the dominant 7th.



(*c*) Sometimes the *root* of a dominant 7th in its root position *remains stationary*, notwithstanding what was said in §96*d*, the chord of resolution in such a case being that of a $\frac{6}{4}$. Of course this resolution could not take place at the end of a movement (§84) or portion of a movement.



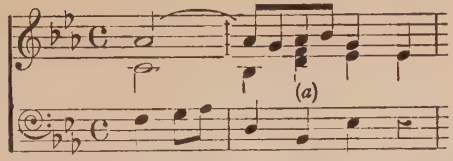
(*d*) Some writers, Handel especially, have been known to resolve the last inversion of a dominant 7th on to the root position instead of the first inversion of the tonic chord. Such resolutions must be judged by their effect in the connection in which they occur, and be regarded as examples of what is possible rather than what is expedient.



The following examples will show how far the above rules are deduced from the practice of eminent composers.

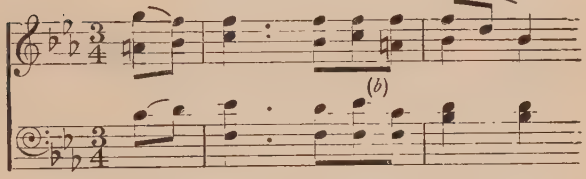
BOYCE—"O where shall wisdom."

Ex. 54.



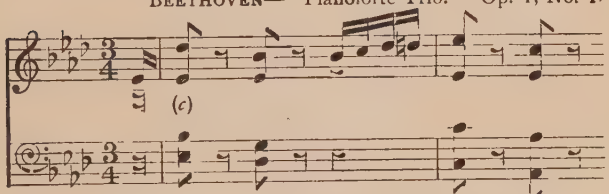
MOZART—"Die Zauberflöte."

Ex. 55.



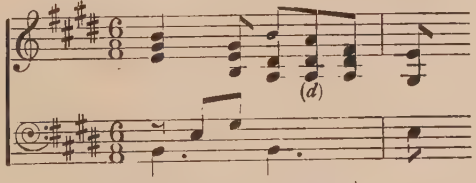
BEETHOVEN—"Pianoforte Trio." Op. 1, No. 1.

Ex. 56.



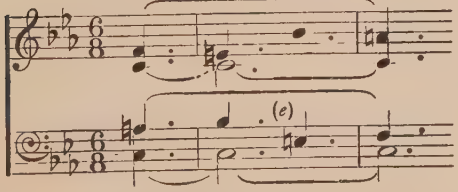
BENNETT—"The Lake."

Ex. 57.



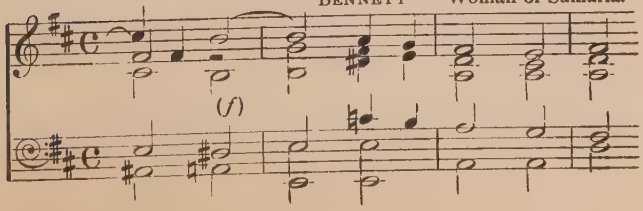
BEETHOVEN—"Sonata in E♭." Op. 7.

Ex. 58.



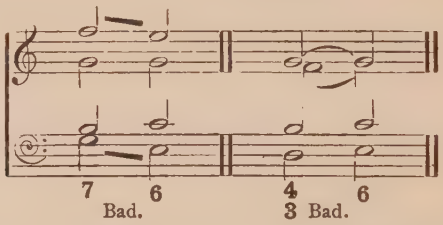
BENNETT—"Woman of Samaria."

Ex. 59.



At *a*, Ex. 54, the dominant 7th resolves ornamentally by proceeding to the nearest harmony note above it, and then descending to the note of resolution, a process which is exactly reversed at *b*, Ex. 55. At *c*, Ex. 56, the 7th is transferred from the melody to the bass. At *d*, Ex. 57, it is doubled, one 7th resolving ornamentally. At *e*, Ex. 58, and also at the beginning of the second bar of Ex. 55, the dominant 7th resolves upon a second inversion of the tonic. At *f*, Ex. 59, a $\frac{6}{4}$ is followed by the root position of the tonic of the passage, in this case E minor.

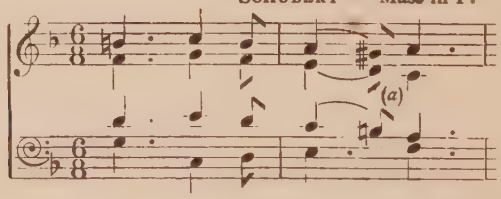
106.—In writing chords of the dominant 7th, or other discords, the student should be careful to avoid proceeding in similar motion from a 2nd or a 7th to an 8ve or a unison :—



107.—When in a minor key a dominant 7th is followed or preceded by the chord of the submediant, the 3rd in the latter chord should be doubled in order to avoid consecutives or other forbidden progressions (§42).

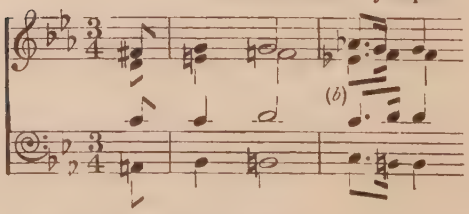
SCHUBERT—"Mass in F."

Ex. 60.



MACFARREN—"Joseph.'

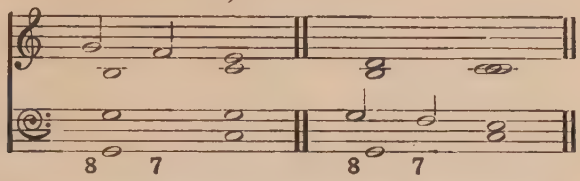
Ex. 61.



(*a*) Dominant 7th (in A minor) followed by the submediant chord. Observe the ornamental (ascending) resolution of the 7th in the first chord of Ex. 60.

(*b*) First inversion of the submediant chord (in C minor) preceded and followed by the first inversion of the dominant 7th.

108.—Sometimes a common chord is followed by a dominant 7th on the same bass. This is figured 8 7, and implies a 3rd and sometimes a 5th, 8 and 3 or 5 and 3 remaining stationary.

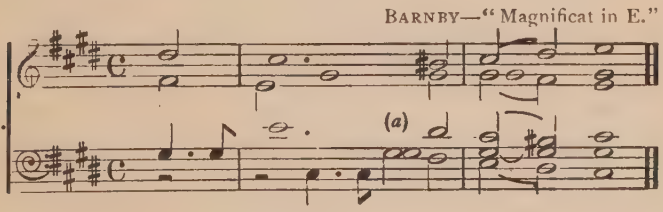


109.—It should be clearly understood that the dominant 7th, or one of its inversions, can be used instead of the common chord of the dominant in forming the authentic cadence (§53), the interrupted cadence (§§56, 94), or any inverted cadence (§§77, 78) having the dominant for its penultimate chord.

110.—In harmonizing a melody, the dominant 7th in the key in which a passage is written can almost always be employed when the melody progresses in accordance with the movement prescribed for any of the notes of that chord, *i.e.* when the melody proceeds from leading note to tonic, from subdominant to mediant, from dominant to tonic, etc. Sometimes a $\frac{6}{4}$ is followed by a third inversion of a dominant 7th. In this case the consecutive 4ths are allowed (one of them being augmented) even when occurring between the outside parts (§85), as at *a* in the following example. (See also Mendelssohn, "Lieder ohne worte," No. 16, bar 8.)

BARNBY—"Magnificat in E."

Ex. 62.



QUESTIONS ON CHAPTER X.

1.—What is meant by the preparation, percussion, and resolution of a discord?

2.—Which of the above processes is optional and which are essential?

3.—Must a discord always resolve upon a concord?

4.—How should a dissonant note be approached if unprepared?

5.—How are dissonant notes generally resolved, and what exceptions are there to the usual method of resolution?

6.—Must every dissonant note in a discord descend?

7.—What are fundamental discords, and what degrees of a scale are selected for their roots?

8.—Can a discord have more than one root?

9.—Which is the most important class of fundamental discords, and what is the most important discord in that class?

10.—Describe the construction of the dominant 7th, name the intervals of which it consists, and the degrees of the scale which are employed in its formation.

11.—What are secondary 7ths, by what other name are they known, and wherein do they differ from dominant 7ths?

12.—Shew how the importance of the dominant 7th arises from the nature of its construction, its fitness for the purposes of modulation, and its effect upon the tonality of a passage.

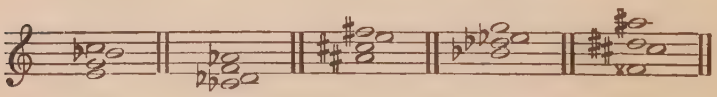
13.—Upon what chords does the dominant 7th generally resolve, and what cadences are formed by such resolutions?

14.—Write out the dominant 7ths on the notes and in the keys of A, B♭, and F.

15.—Transpose the above into the keys of their respective tonic minors.

16.—Name the number, bass notes, intervals, figuring and implied intervals of the inversions of the dominant 7th.

17.—Correctly figure the following, giving the root and the key:—



18.—How can you ascertain the root of an inversion of a dominant 7th?

19.—What distance is the root from the bass note of the third inversion of a dominant 7th?

20.—What is objectionable in the resolution of the second inversion of a dominant 7th upon the second inversion of the submediant triad?

21.—What note may be doubled and what omitted in the root position of a dominant 7th?

22.—Give rules for the resolution of the dominant 7th, and according to these rules resolve the 7ths in questions 14 and 17.

23.—What is gained by the omission of the 5th in the root position of the dominant 7th?

24.—Can any interval other than the 5th be omitted in the root position of the dominant 7th?

25.—Name a chord other than the tonic or submediant by which the dominant 7th could be followed.

26.—What is peculiar about the bass of the second inversion of the dominant 7th?

27.—Write out three forms and four resolutions of this inversion.

28.—Describe the chord of the 6th on the supertonic.

29.—What do you understand by an ornamental resolution?

30.—Say when the dominant 7th may be doubled, and give two instances in which it may ascend.

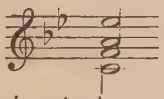
31.—What is the origin of the second inversion of the diminished triad on the 7th of the scale, and why is its use forbidden except in a sequence or as a passing note?

32.—To what form of the dominant 7th was Handel particularly partial, and what peculiar resolution of the chord is to be found in his works?

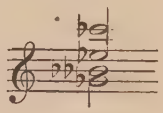
33.—What intervals are implied by the figurings 8 7, 7 8, 7 5, and 5 7?

34.—What objectionable form of hidden 8ves and unisons is strictly forbidden in the resolution of a dominant 7th?

35.—Name any cases in which the 3rd of the submediant triad must be doubled.

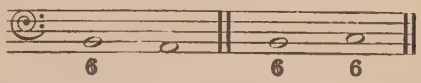
36.—Resolve  in as many ways as you can.

37.—Resolve, giving the key and root:—
Then enharmonically vary the chord and again resolve, stating the altered key and root. Figure the bass.



38.—Which inversions of the dominant 7th imply a 6th, and which forms of the chord imply a 3rd?

39.—Correctly fill up:—



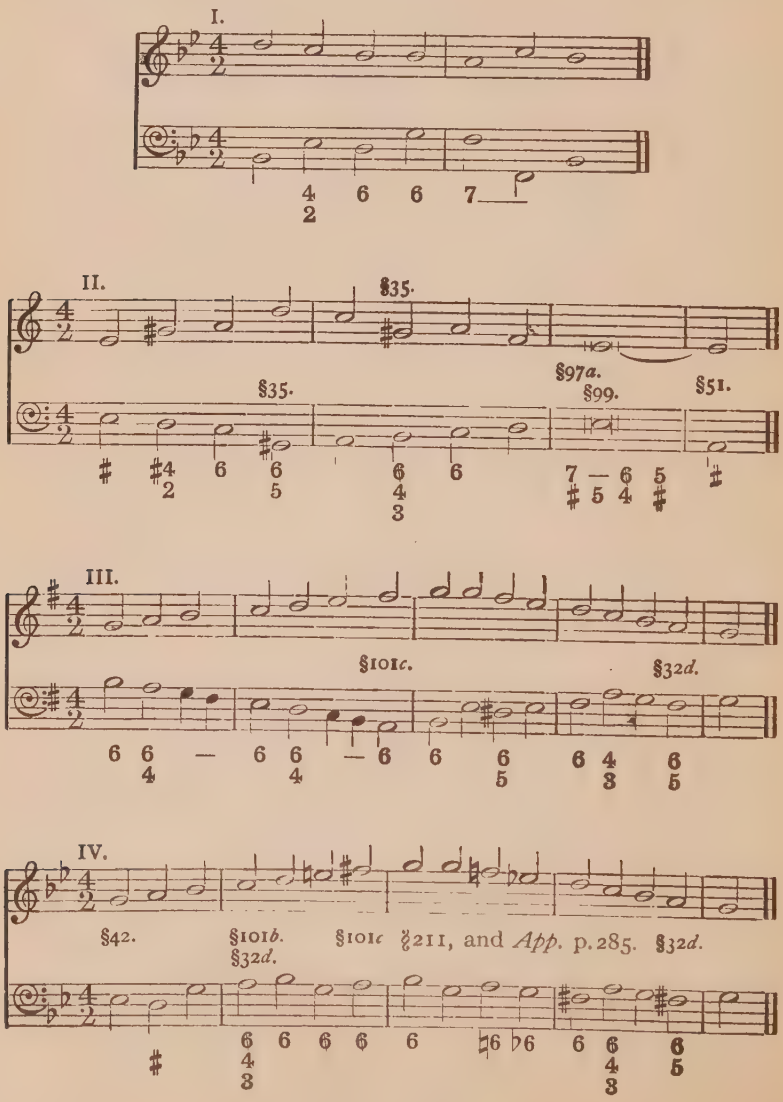
40.—Upon E as a bass note write and resolve (*a*) a dominant 7th, (*b*) the first inversion of a dominant 7th, (*c*) the second inversion of a dominant 7th, and (*d*) the third inversion of a dominant 7th Correctly figure and resolve each chord, giving its root and key.

41.—How can we ascertain when ominant 7th may be used in harmonizing a melody?

42.—When are consecutive 4ths from the bass permitted?

Exercises on Chapter X.

An alto and a tenor part are required to be added. The root of every inverted chord should be denoted by a capital letter placed underneath the bass.



V.

§105*a*.

7 6 4 6 4 4 6 7 8 6 5 6 5 7
2 3 2 4

VI. (Single Chant.)

§44*d*. §105*a*.

4 6 7 6 6 7 8
2 ♮ 5 5 5 6
♮

VII. (C.M. "Dundee.")

§32*d*.
§101*b*.

§97*a*.

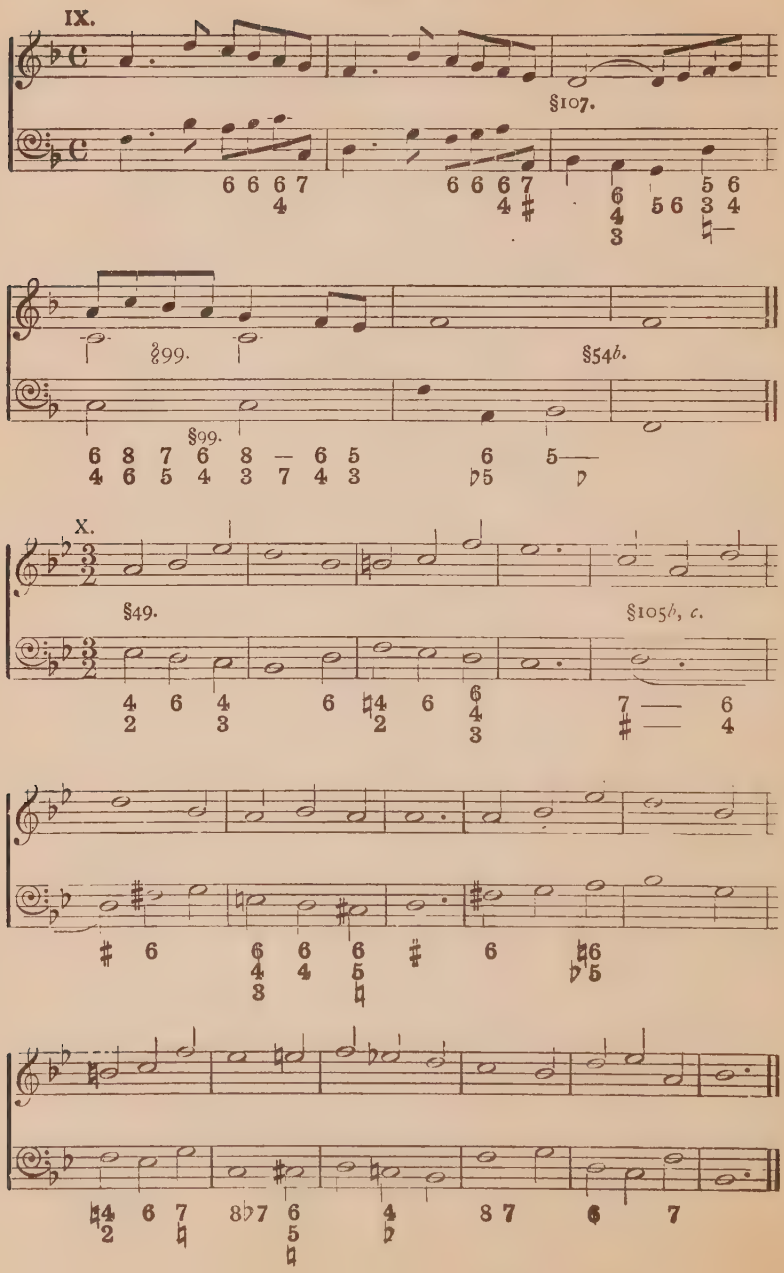
4 6 6 ♭7 7 7
3

§108.

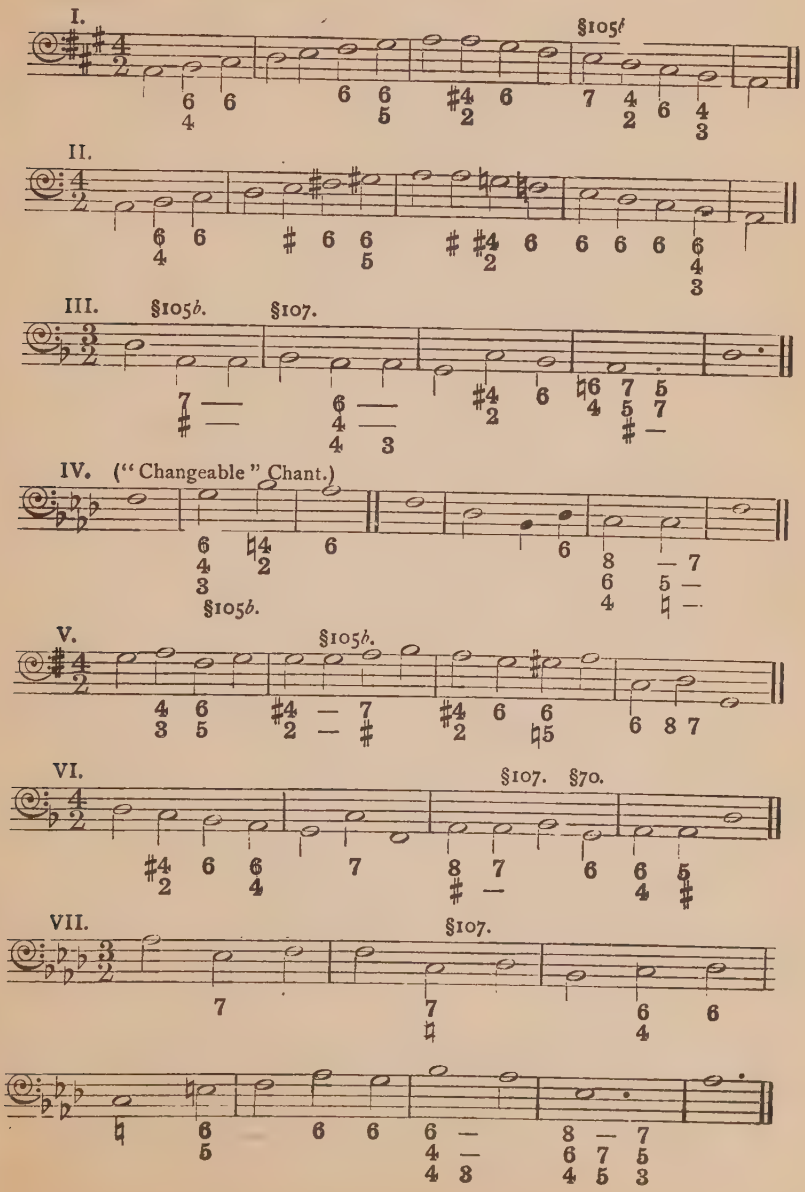
5 6 ♮4 6 8 7 — 5 6 8 7
2 ♮— 6

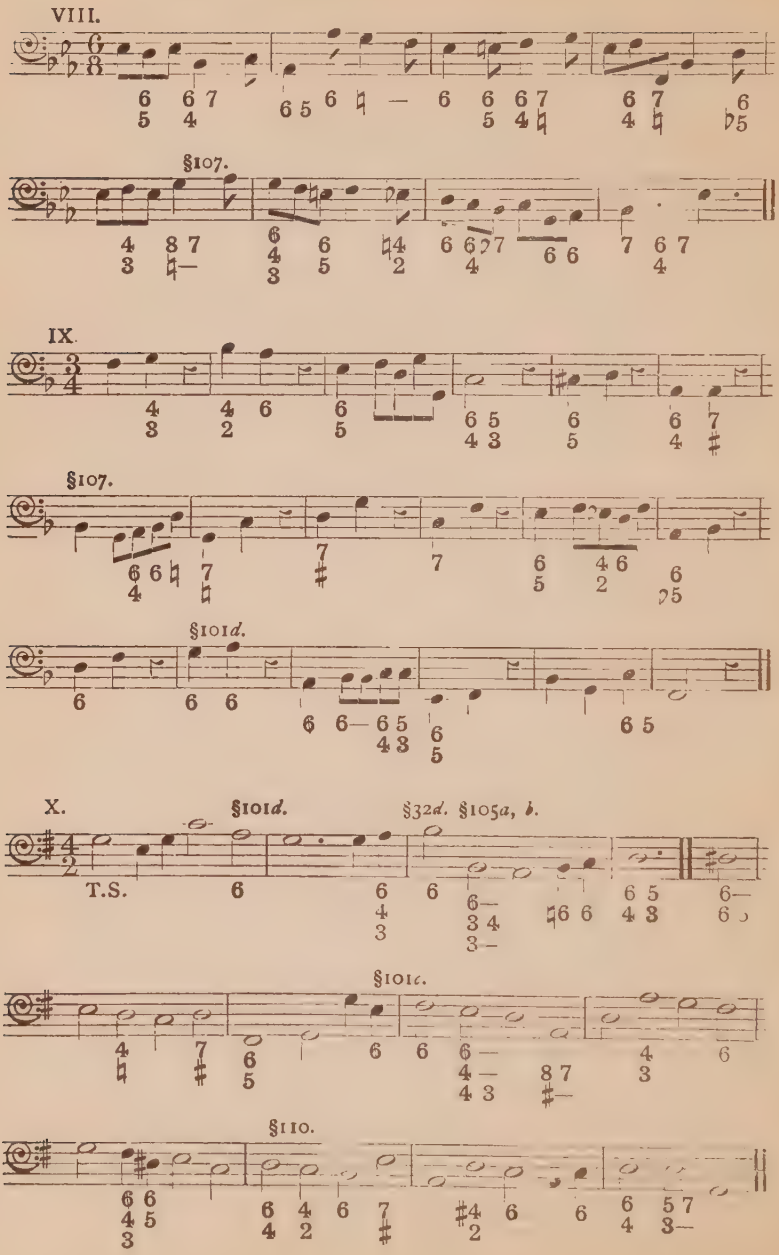
VIII. (Double Chant.)

7 6 4 6 6 5 6 6 4 6 6 6 6 7
3 4 6—4 3 4 ♮5 2 5
3


IX.
§107.
6 6 6 7
4
6 6 6 7
4 ♯
6
4
3
5 6
3 4
♮
§99.
§54b.
§99.
6 8 7 6 8 — 6 5
4 6 5 4 3 7 4 3
6 5—
♭5 ♮
X.
§49.
§105b, c.
4 6 4 6 ♮4 6 6
2 3 2 4
3
7 — 6
♯ — 4
♯ 6 6 6 6 ♯ 6 ♮6
4 4 5 ♭5
3 ♮
♮4 6 7 8♭7 6 4 8 7 6 7
2 ♮ 5 ♭
♮

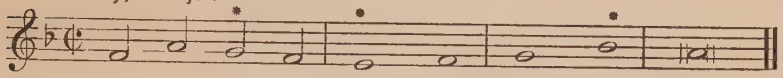
In the following exercises three upper parts are to be added. The roots of the inverted chords should be denoted by a capital letter as before.



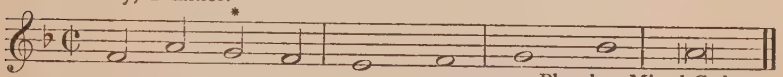

VIII.
§107.
IX.
§107.
§101*d*.
X.
§101*d*.
§32*d*. §105*a*, *b*.
T.S.
§101*c*.
§110.

Before or after harmonizing the following melodies, the student may re-harmonize those given in preceding chapters, introducing dominant 7ths wherever possible. An asterisk placed over a note signifies that that note may be harmonized as a part of a dominant 7th.

I. Key, F major.

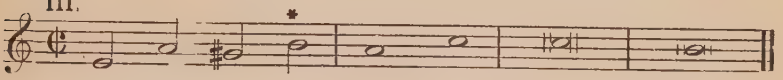


II. Key, D minor.

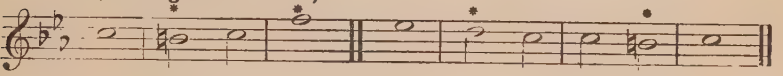


Plagal or Mixed Cadence.

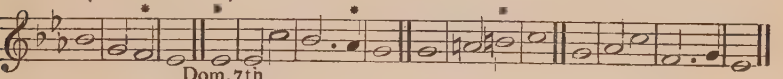
III.



IV. ("Changeable Chant.)

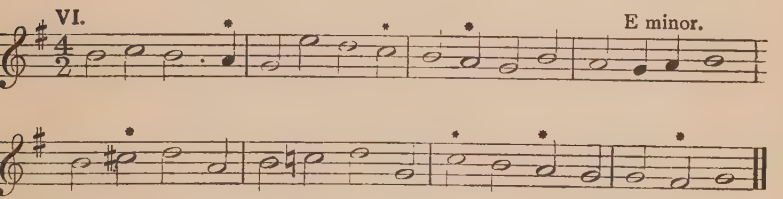


V. (Double Chant.)



Dom. 7th on E♭.

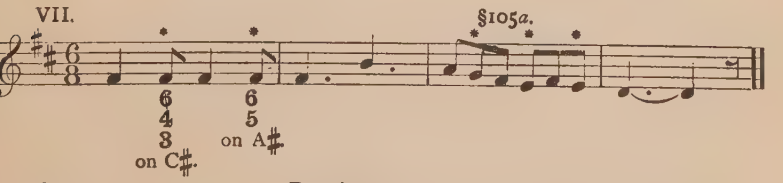
VI.



E minor.

VII.

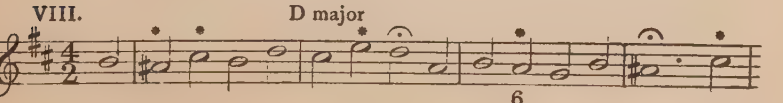
§105*a*.



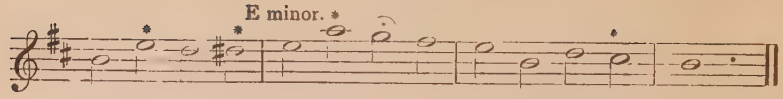
6 4 3 on C♯. 6 5 on A♯.

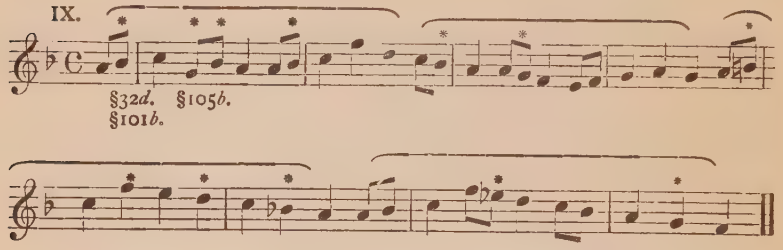
VIII.

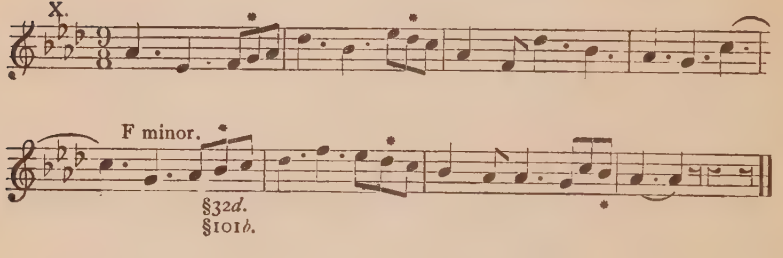
D major

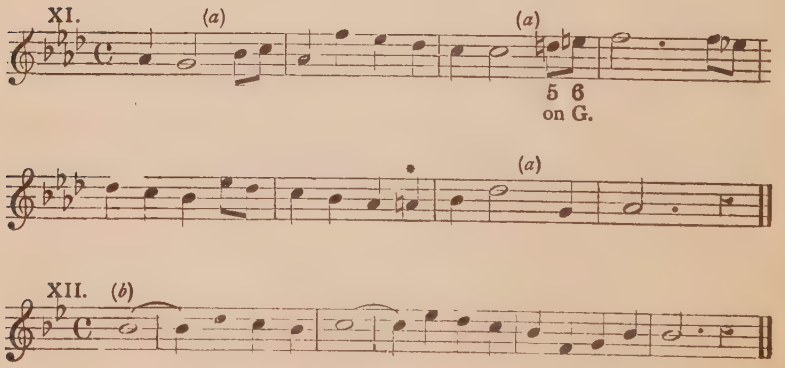


6 5 on D♯.







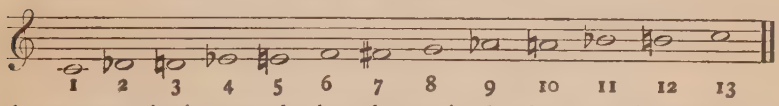


(*a*)—A chord to be introduced on the accented beat.
(*b*)—Crotchet movement to be kept up throughout.

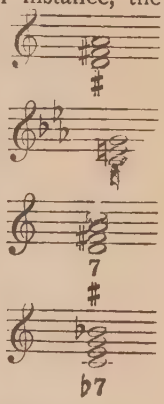
CHAPTER XI.

Chromatic Triads and Chords of the Seventh on the Tonic and Supertonic.

111.—In §48 we defined a chromatic chord as one which required an accidental but implied no modulation, and stated that, with the exception of the tonic minor chord itself, the chords of the tonic minor key could be used chromatically in the key of the tonic major. But, in addition to these, we find upon writing out what is known as the "Harmonic" form of the chromatic scale

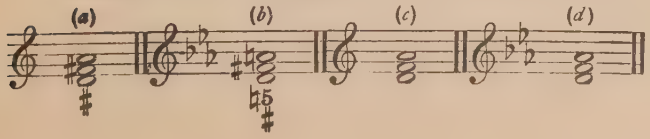


that we can obtain several other chromatic chords. For instance, the third, seventh, and tenth notes of the above scale give us a chord which is known as the *chromatic chord on the supertonic*, and is identical with the dominant chord of the dominant key, while the first, fifth, and eighth notes give us a chord which, if occurring in a minor key, is termed the *chromatic chord on the tonic*, and is identical with the dominant chord of the subdominant key. Similarly, the third, seventh, tenth and thirteenth notes give us a chord known as the chromatic 7th on the supertonic, and identical with the dominant 7th of the dominant key, while the first, fifth, eighth, and eleventh notes give us a chord which, in a major or a minor key, is known as the chromatic 7th on the tonic, and is identical with the dominant 7th of the subdominant key.

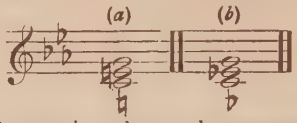


112.—We presume that the student will have no difficulty in distinguishing between chromatic and diatonic chords occurring upon the same degrees of the scale, because they differ not only in treatment, but in the quality of their intervals and their actual appearance, *e.g.* :—

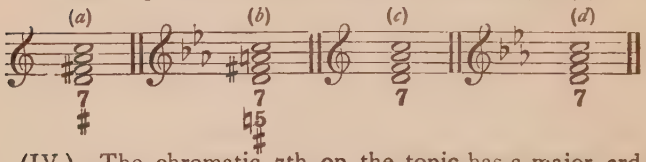
(I.)—The chromatic triad on the supertonic is a *major* triad, having its 3rd accidentally raised when in a major key (*a*), or its 3rd and 5th when in a minor key (*b*); while the diatonic triad on the supertonic is a minor triad in a major key (*c*), and a diminished triad in a minor key (*d*).



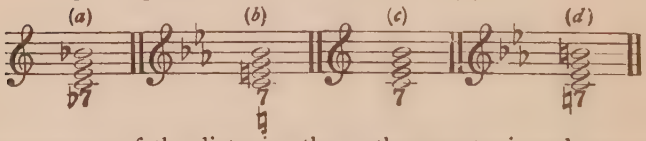
(II.)—The chromatic triad on the tonic of a minor key is also a *major* triad, having its 3rd accidentally raised (*a*); while the diatonic triad on the tonic is a minor triad (*b*).



(III.)—The chromatic 7th on the supertonic has a major 3rd (denoted by an accidental), a perfect 5th (only denoted by an accidental when in a minor key), and a minor 7th (*a*) (*b*); while the diatonic 7th on the supertonic of a major key has a minor 3rd, a perfect 5th, and a minor 7th (*c*), and the diatonic 7th on the supertonic of a minor key has a minor 3rd, a diminished 5th, and a minor 7th (*d*).

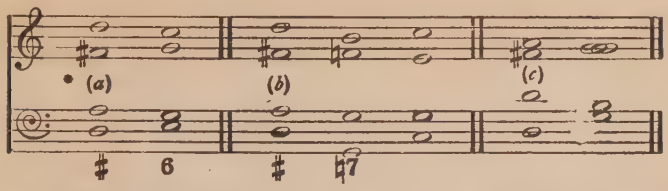


(IV.)—The chromatic 7th on the tonic has a major 3rd (only denoted by an accidental when in a minor key), a perfect 5th, and a minor 7th (only denoted by an accidental when in a major key), (*a*) (*b*); while the diatonic 7th on the tonic of a major key has a major 3rd, a perfect 5th, and a major 7th (*c*), and on the tonic of a minor key a minor 3rd, a perfect 5th, and a major 7th (*d*).

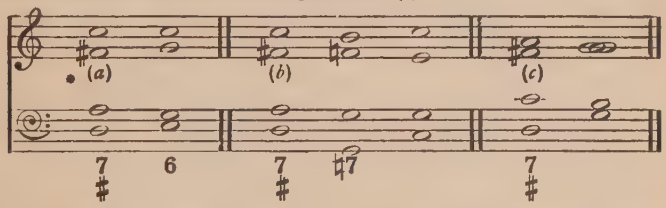


The true nature of the diatonic 7ths on the supertonic and tonic will be explained in subsequent chapters. (§202, and Chap. XVIII.)

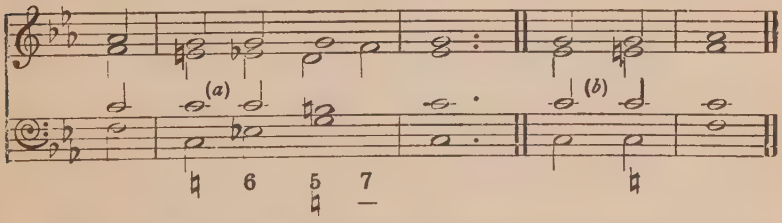
113.—Chromatic chords are distinguished by their *progression* from the diatonic chords with which they are identical in appearance and quality. Thus the chromatic chord on the supertonic, in order to be distinguished from the dominant chord of the dominant key, must be followed either by the *tonic* chord, in which case the 3rd *rises* a *diatonic semitone* (*a*), or by some chord containing the *subdominant* of the key, in which case the 3rd *falls* a *chromatic semitone* to the subdominant (*b*). If, however, a chromatic chord on the supertonic be followed by the chord of the dominant (*c*), a modulation is effected to that key, and the chromatic chord acts in a double capacity, being approached as a chromatic triad on the supertonic of one key, and quitted as a diatonic triad on the dominant of another key. Hence the utility of the chromatic supertonic triad as a means of modulation between any key and that of its dominant.



114.—The chromatic 7th on the supertonic can also be distinguished from the dominant 7th of the dominant key by the progression of its 3rd, which moves in accordance with the rules already given. The 7th, however, *remains stationary* when the 3rd ascends (*a*), but *falls a diatonic semitone* (like the dominant 7th) when the 3rd descends (*b*). Should this chord be followed by the dominant chord, it constitutes a modulation into the key of the dominant, as was observed in the case of the chromatic triad on the supertonic (*c*).

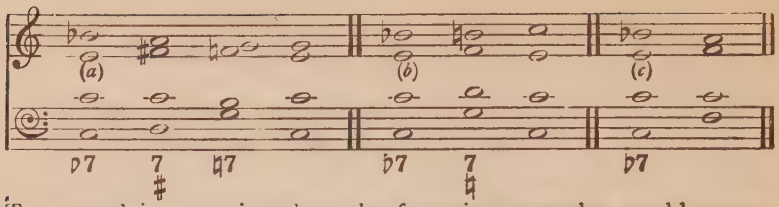


115.—The chromatic chord on the tonic of a minor key can be distinguished from the dominant chord of the subdominant key by the progression of its 3rd (the chromatic note), which must be approached from the subdominant and be followed by the mediant (*i.e. fall a chromatic semitone* (*a*), or *vice versâ*. Of course, if the 3rd return to the subdominant, a regular modulation to that key is effected (*b*).

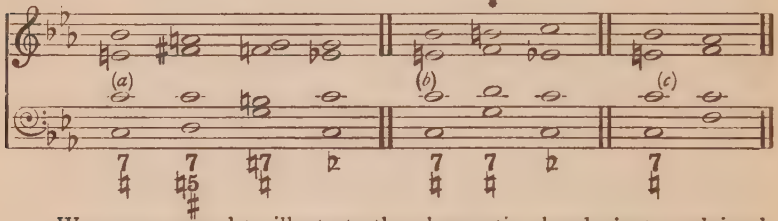


116.—Another point of distinction between the chromatic chord of the 7th on the tonic and the chord of the dominant 7th of the subdominant key, is that the former is generally followed by the chromatic 7th or some other chromatic discord on the supertonic, in which case the *3rd rises a whole tone* (*a*); or by the dominant 7th or some other dominant discord, in which case the *7th rises a chromatic semitone* (*b*). When followed by the subdominant chord, it constitutes a regular modulation into that key (*c*).

* These examples should be transposed into a minor key.



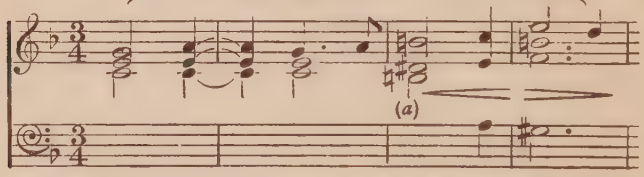
Transposed into a minor key, the foregoing examples would appear thus :—



We now proceed to illustrate the chromatic chords just explained, commencing with the chromatic triad on the supertonic.

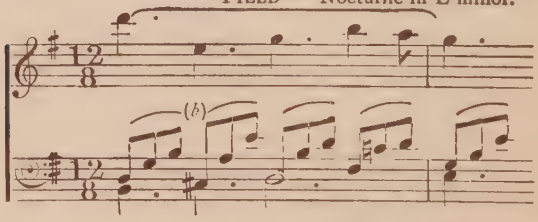
STAINER—"St. Mary Magdalen."

Ex. 63.



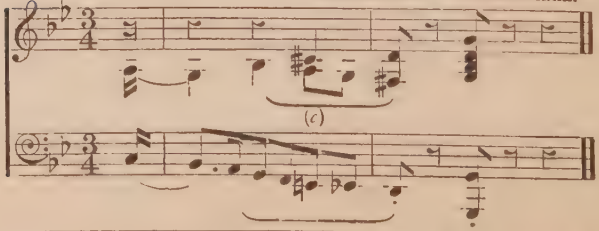
FIELD—"Nocturne in E minor."

Ex. 64.



SCHUMANN—"Kreisleriana."

Ex. 65.



* Although only one chord be interpolated between the E♮ and E♭ (§41), there is no objectionable false relation. (*Vide* §41, and *Appendix*, Ex. 14.)

At *a*, Ex. 63, the chromatic chord on the supertonic of A minor is resolved upon the tonic chord. At *b*, Ex. 64, the first inversion of the supertonic triad is resolved upon the second inversion of the tonic chord, both harmonies being expressed in arpeggio. At *c*, Ex. 65, the second inversion of the supertonic triad is resolved upon the chord of the augmented 6th (§248). Another example of this rarely-used form of the supertonic harmony may be found in the 12th bar of Bennett's "Rondeau à la Polonaise," Op. 37, and also in the first movement of Mendelssohn's "Scotch" Fantasia, Op. 28.

The following examples illustrate the resolution of the chromatic triad on the supertonic upon some chord containing the subdominant of the key (§113*b*). Observe that in all cases the 3rd of the supertonic chord descends a chromatic semitone.

BEETHOVEN—"Sonata in E♭." Op. 7.

Ex. 66.

SCHUMANN—"Die Davidsbündler."

Ex. 67.

HAYDN—"Imperial Mass."

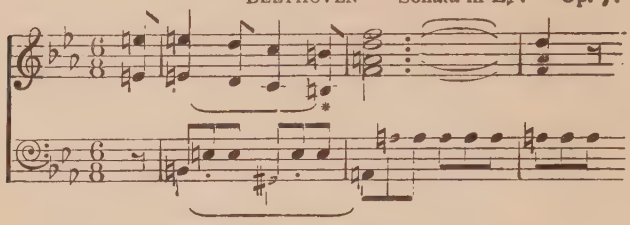
Ex. 68.

At *a*, Ex. 66, the first inversion of the chromatic chord of the supertonic resolves upon the first inversion of the diatonic supertonic triad. At *b*, Ex. 67, the first inversion of the supertonic resolves upon the third inversion of the dominant 7th; while at *c*, Ex. 68, the root position of the supertonic resolves upon the first inversion of the dominant minor 9th (§164).

Our next task is to show modulation by means of the supertonic chord. We have already alluded (§113*c*) to a supertonic chord quitted as a dominant, and will now show the dominant chord in A minor quitted as a supertonic in D minor (Ex. 69), and then the subdominant chord in G (Ex. 70) quitted as the supertonic chord in B♭.

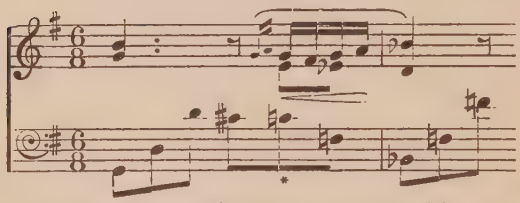
BEETHOVEN—"Sonata in E♭." Op. 7.

Ex. 69.



CHOPIN—"Nocturne in G." Op. 37, No. 2.

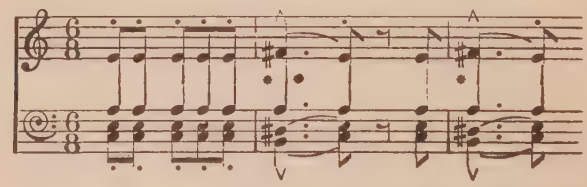
Ex. 70.



Exs. 71-73 show respectively the root positions and first and second inversions of the chromatic 7th on the supertonic, the resolution in each being on to the chord of the tonic, the 7th of the supertonic remaining stationary. The third inversion of the supertonic 7th is not generally resolved upon the tonic chord, but upon a dominant discord.

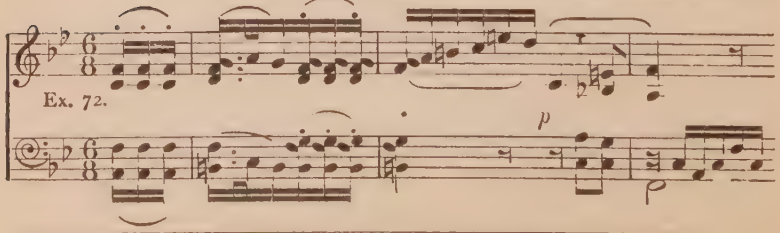
HELLER—"Nuits Blanches."

Ex. 71.



MENDELSSOHN—"Clavierstück in B♭."

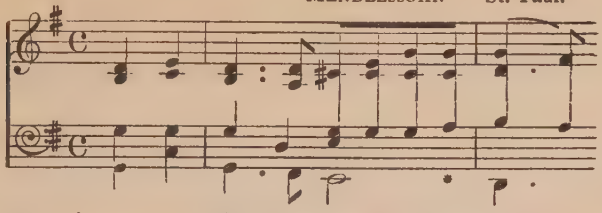
Ex. 72.



† In this chord F is understood.

MENDELSSOHN—"St. Paul."

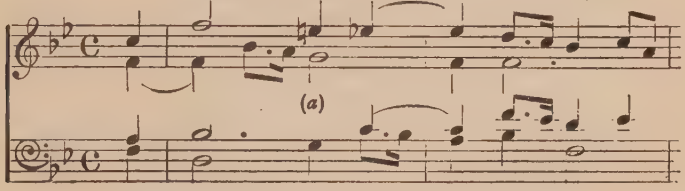
Ex. 73.



The following examples illustrate the resolution of the supertonic 7th upon some chord containing the subdominant of the key, the supertonic 3rd descending a chromatic semitone.

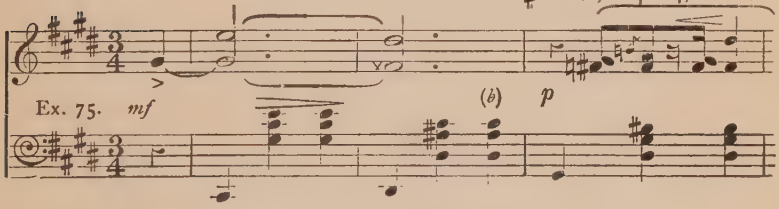
MENDELSSOHN—"Organ Sonata," No. 4, in B♭.

Ex. 74.



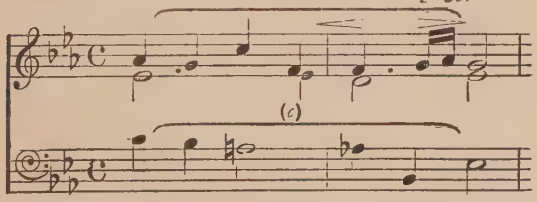
CHOPIN—"Waltz in C♯ minor," Op. 64, No. 2.

Ex. 75.



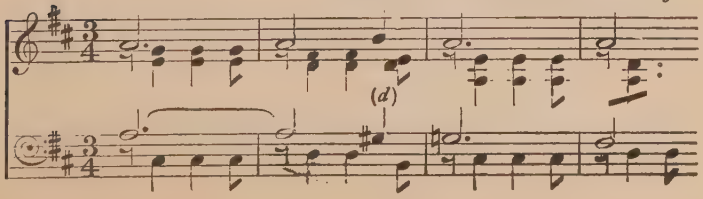
ROSENHAIN—"Andante and Rondo." Op. 39, No. 1.

Ex. 76.



SCHUMANN—"Novelletten." No. 5.

Ex. 77.



BENEDICT—"St. Peter."

Ex. 78.

(*e*)

At *a*, Ex. 74, the second inversion of the supertonic 7th in B♭ resolves on the diatonic supertonic triad. Note the doubled 5th and the omission of the root in the discord (§118). At *b*, Ex. 75, the root position of the supertonic 7th in C♯ minor resolves upon the root position of the dominant chord. The bass note struck upon the accented beat is understood to be (and by the aid of the Pianoforte Pedal is actually) heard throughout the bar. Hence all the chords in Ex. 75 are really in their root positions. At *c*, Ex. 76, the first inversion of the supertonic 7th in E♭ resolves in three-part harmony upon the third inversion of the dominant 7th. At *d*, Ex. 77, the second inversion of the supertonic 7th in D resolves upon the first inversion of the dominant 7th, the 7th of the former chord falling to the root of the latter (§105*d*). At *e*, Ex. 78, the third inversion of the supertonic 7th in A is resolved upon the first inversion of the dominant 7th.

Supertonic 7ths are also resolved upon dominant harmonies other than dominant 7ths; we give in Ex. 79 a resolution upon a dominant 11th (§200), and in Ex. 80 one upon a dominant 13th (§229).

MENDELSSOHN—"Allegro Brillante." Op. 92.

Ex. 79.

Supertonic 7th in E.

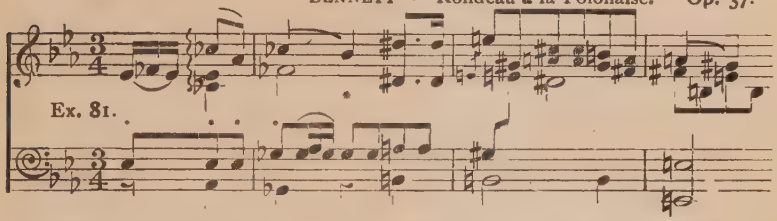
BENNETT—"Study in D." Op. 11, No. 5.

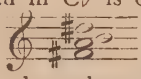
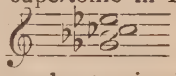
Ex. 80.

A supertonic 7th quitted as a dominant having been given in §114, the following beautiful example shows the converse, a dominant 7th quitted as a supertonic by implied enharmonic change.

BENNETT—"Rondeau à la Polonaise." Op. 37.

Ex. 81.

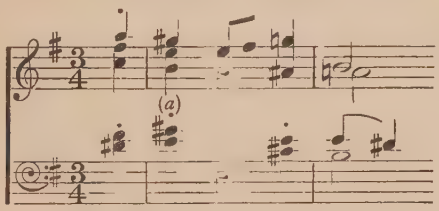


At * the dominant 7th in C♭ is quitted as the supertonic in F♭, the dominant chord of the new key reading  instead of  and thus leading into E, the enharmonic of F♭, in order to simplify the reading of the passage.

Exs. 82-84 illustrate the employment of the chromatic triad on the tonic of a minor scale.

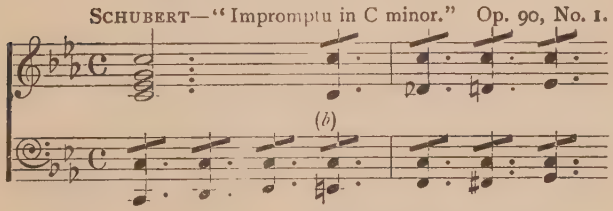
BENNETT—"Scherzo." Op. 27.

Ex. 82.



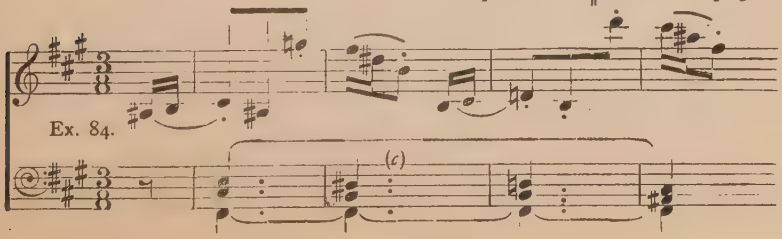
SCHUBERT—"Impromptu in C minor." Op. 90, No. 1.

Ex. 83.



MENDELSSOHN—"Capriccio in F♯ minor." Op. 5

Ex. 84.



At *a*, Ex. 82, the chromatic chord on the tonic of E minor is followed by the supertonic minor 9th (§164). The F♯ in the melody is a passing note (§123), and does not affect the harmony. At *b*, Ex. 83, the 3rd in the first inversion of the chromatic tonic chord of C minor *ascends* a chromatic semitone. At *c*, Ex. 84, the 3rd in the second inversion of the chromatic tonic chord of B minor *descends* a chromatic semitone, the second inversion of the chromatic tonic triad being followed by that of the diatonic.

The following examples of modulation cannot fail to interest the student. At *a*, Ex. 85, the chromatic tonic chord of C♯ minor is quitted as the dominant chord of F♯ minor; while at *b* we have the converse, the dominant chord of F♯ minor being quitted as the chromatic tonic chord of C♯ minor.

MOSCHELES—"Study in C♯ minor." Op. 70, No. 20.

Ex. 85. (*a*) (*b*)

By this time it will doubtless be clear to the student that as a common chord is common to five keys (§19) we can, from any chromatic triad, modulate into at least four keys; and by regarding a chromatic triad on the supertonic of one key as a chromatic triad on the tonic of another, or *vice versâ*, the possibilities of modulation are still further increased.

We now give some examples of tonic 7ths resolving on supertonic and dominant harmony.

CHOPIN—"Ballade in A♭." Op. 47.

Ex. 86. (*a*)

CRAMER—"Study in G."

Ex. 87. (*b*)

WAGNER—"Tristan and Isolde."

Ex. 88.

(*c*)

MENDELSSOHN—"Pianoforte Fugue in E minor."

Ex. 89.

(*d*)

MENDELSSOHN—"Organ Sonata, No. 1."

Ex. 90.

(*e*)

Exs. 86 and 87 are interesting as showing tonic 7ths with the omission of the 3rd (*a*) and the omission of the root (*b*). In Ex. 86 the resolution of the third inversion of the tonic 7th is upon the second inversion of the supertonic 7th. In Ex. 87 the first inversion of the tonic 7th resolves upon the first inversion of the supertonic minor 9th (§164). There is no false relation between B♭ and B♮, one chord being a fundamental discord. (*Vide Appendix*, Exs. 13 and 15.)

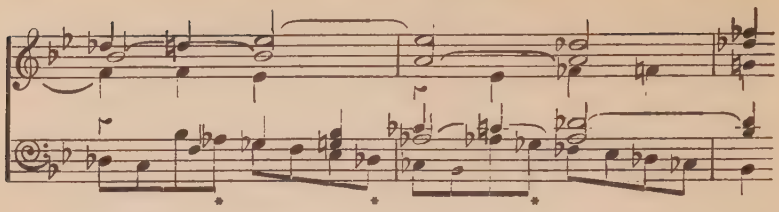
Exs. 88—90 show, at *c*, the tonic 7th in F resolving upon the dominant 7th, F, the bass, being regarded as a tonic pedal (§§286 and 287) and therefore not affecting the harmony; at *d* the tonic 7th in B minor resolving upon the dominant minor 9th (§164); and, at *e*, the tonic 7th in A♭ resolving upon the dominant 11th (§202). These resolutions will be better understood after the student has studied chords of the 9th and 11th.

Of modulation by means of tonic 7ths we give two examples :—

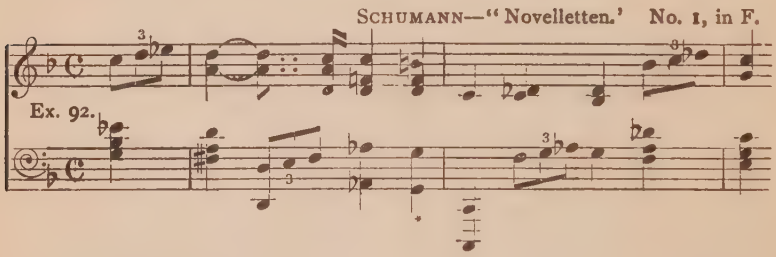
BACH—"Organ Fantasia in G minor." Vol. II.†

Ex. 91.

† Peters' Edition.

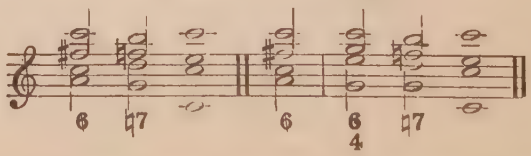


The above is a fine sequence of modulations into the key of the subdominant by quitting the third inversion of the tonic 7th in every key passed through as the dominant 7th of the new key, *e.g.*, at the end of bar 1, the tonic 7th in G minor is quitted as the dominant 7th in C minor; in the middle of bar 2, the tonic 7th in C minor is quitted as the dominant 7th in the key of F minor, and so on. In the second bar of the following example the tonic 7th in G minor is quitted as a supertonic 7th in F minor.



117.—It will scarcely be necessary to add that, in chromatic chords, the notes requiring accidentals must always be indicated in the figuring.

118.—The rules given in Chapter X., relative to the ornamental resolution and transference of discords from one part to another, hold good when applied to tonic or supertonic discords. Also, it should be remembered that the roots and 5ths of these chords are as free in their progression as the corresponding intervals in the chord of the dominant 7th; and that as in the latter chord, so in tonic and supertonic discords, the 5th may be omitted and the root doubled, or *vice versâ* (*vide* §116*a*, *b*, *c*); while in the second inversion of the supertonic 7th the root may sometimes be omitted and the 7th doubled, *e.g.*,



At *a*, Ex. 74, we have already illustrated the omission of the root and the doubling of the 5th in a supertonic 7th, and instances of omissions

in tonic 7ths have been given in Exs. 86 and 87. We now give some examples of the doubling of the 7th in the second inversion of the chord of the supertonic 7th, combined with ornamental resolutions and transference.

BEETHOVEN—"Quartett in C♯ minor." Op. 131.

Ex. 93.

p *sotto voce.*

HANDEL—"Messiah."

Ex. 94.

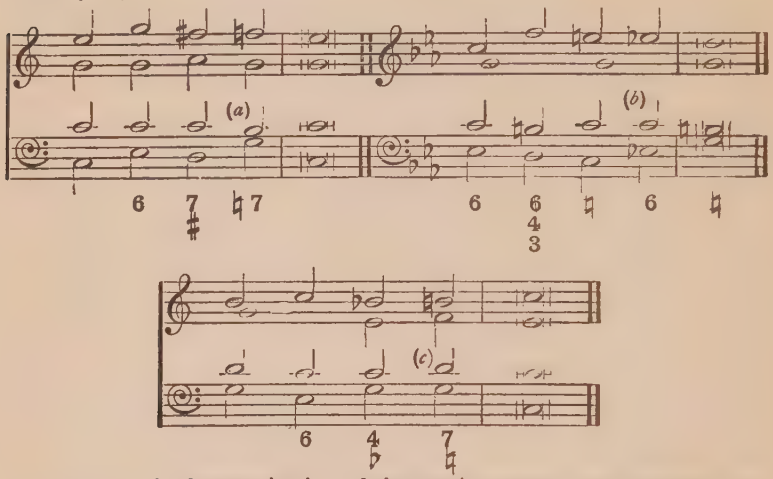
In the second bar of Ex. 93 the supertonic 7th in A is shewn with the 7th doubled and the root omitted, the lower 7th being transferred to the tenor, while the upper resolves ornamentally upon a chord of the dominant 11th (§200). In the second bar of Ex. 94 the supertonic 7th, with root omitted and 5th doubled, resolves upon the subdominant chord, the chromatic 3rd in the supertonic chord resolving ornamentally to another harmony note E, but finally proceeding to the subdominant (*i.e.* falling a chromatic semitone, §114*b*). The B in the melody of the second bar is an auxiliary note and does not affect the harmony (§127). At *, Ex. 95, we have the tonic 7th in B♭ with the root omitted and the 5th doubled. Here the E♭ in the tenor is a passing note (§123).

BACH—"Passion"—St. Matthew.

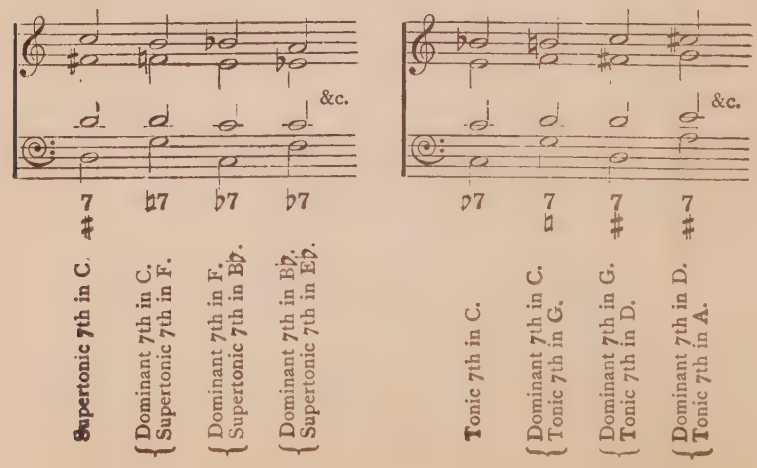
Ex. 95.

119.—A certain indication of the possibility of the employment of the chromatic triad or 7th on the supertonic when harmonizing a melody, is when the melody descends a chromatic semitone from the augmented

to the perfect 4th of the tonic (*a*). Similarly the chromatic triad on the tonic of a minor key may be used when the melody descends a chromatic semitone from the major to the minor 3rd of the tonic (*b*), and the chromatic 7th on the tonic of a major or a minor key may be used when the melody ascends a chromatic semitone from the minor to the major 7th of the tonic (*c*)



120.—In the harmonization of chromatic passages we sometimes use a *sequence* of *chromatic 7ths*, as below, those on the *supertonic* having their *3rds descending a chromatic semitone*, and those on the *tonic* having their *7ths ascending a chromatic semitone*, each chord being approached as chromatic and quitted as diatonic, or *vice versâ*, thus involving perpetual modulation.



The following is a remarkable sequence of supertonic 7ths involving consecutive 5ths (*vide Appendix*, Ex. 5) and ornamental resolution (§118).

CHOPIN—"Mazurka in G minor." Op. 67, No. 2.

Ex. 96.

121.—Some authorities do not consider that the following of the chromatic triad or the chromatic 7th on the supertonic by the dominant harmony constitutes a modulation into the dominant key, provided the dominant chord be immediately followed by some chord containing the subdominant. Similarly, if the tonic 7th be followed by the subdominant and then by some chord containing the leading note, it is generally considered that no modulation has taken place.

MENDELSSOHN—"Pianoforte Concerto in G minor." Op. 25

Ex. 97.

(*a*)

BACH—"Passion"—St. John.

Ex. 98.

(*b*)

HANDEL—"Judas."

Ex. 99.

(*c*)

At *a*, Ex. 97, there is no modulation to D major (although the supertonic chord of G minor resolves on the dominant of the latter key), because in the following bar we have a chord containing the subdominant of G minor, C♮. Similarly at *b*, Ex. 98, the apparent modulation to D (by the resolution of the supertonic 7th in G minor upon the dominant chord of the latter key) is destroyed by the C♮ in the chord next following. Also at *c*, Ex. 99, although the tonic 7th resolves upon the subdominant chord, a modulation into the subdominant (B♭) is avoided by the introduction of E♮ into the melody of the last chord. Observe the unobjectionable false relation (*vide Appendix*, Exs. 13 and 15) in the first bar of Ex. 98, and the Tierce de Picardie (§51) at its close.

Questions on Chapter XI.

1.—Distinguish between a chromatic and a diatonic chord.

2.—Write out the harmonic forms of the chromatic scales of G♭, F♯, A♭, and E.

3.—Show what degrees of the chromatic scale are respectively employed to form the chromatic triads and 7ths on the tonic and supertonic, and say with what chords the latter are identical.

4.—What are the two points of difference between the diatonic and chromatic triads and 7ths on the tonic and supertonic?

5.—State what accidentals are required to form the chromatic triads and 7ths on the tonic and supertonic, also the difference in the quality of these chords and the diatonic chords upon the same notes.

6.—What have you to remark concerning the figuring of chromatic chords?

7.—How can you distinguish between a chromatic and a diatonic chord identical in sound and appearance?

8.—By what chords should the chromatic triads and 7ths on the tonic and supertonic be followed?

9.—Give the progression of the 3rd, or 3rds and 7ths, in the various chromatic chords enumerated in Chapter XI.

10.—How can chromatic chords be employed for the purposes of modulation?

11.—To what keys can we modulate by using the chromatic chords on the tonic and supertonic, and by what means are these modulations effected?

12.—Give some rules for omissions and doublings in chromatic chords.

13.—What rules relative to the chord of the dominant 7th apply to the chords of the tonic and supertonic 7ths?

14.—What melodic progressions indicate the possible use of the various chromatic chords on the tonic and supertonic with which you are at present acquainted?

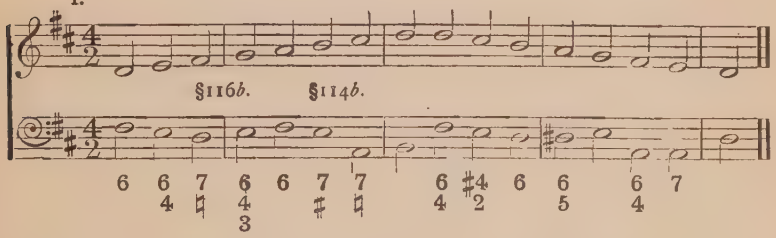
15.—Write, figure, and resolve, in as many different ways as you possibly can, tonic and supertonic triads and 7ths on the notes and in the keys of A, B♭, and C. Chromatic tonic triads to be written in minor keys only; the other chords in both major and minor keys.

16.—By means of chromatic chords modulate from F major to C and B♭ majors, and from G minor to D and C minors.

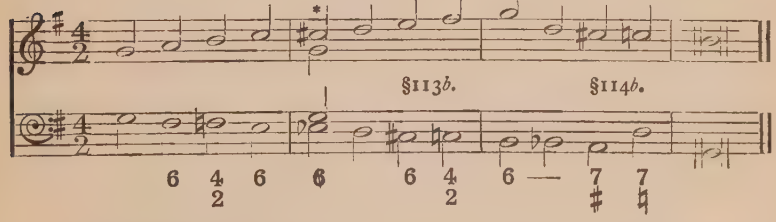
Exercises on Chapter XI.

In working the following exercises, the student, in addition to denoting the roots of discords by capital letters, should endeavour to distinguish between tonic and supertonic triads and discords.

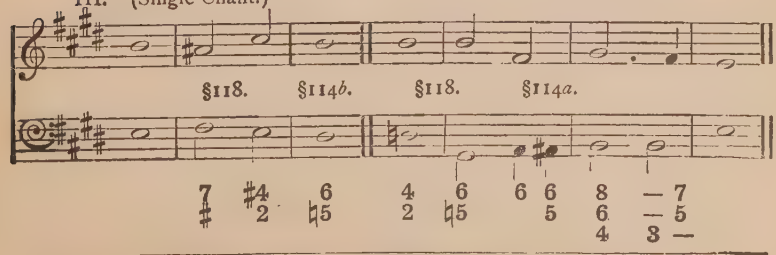
I.



II.

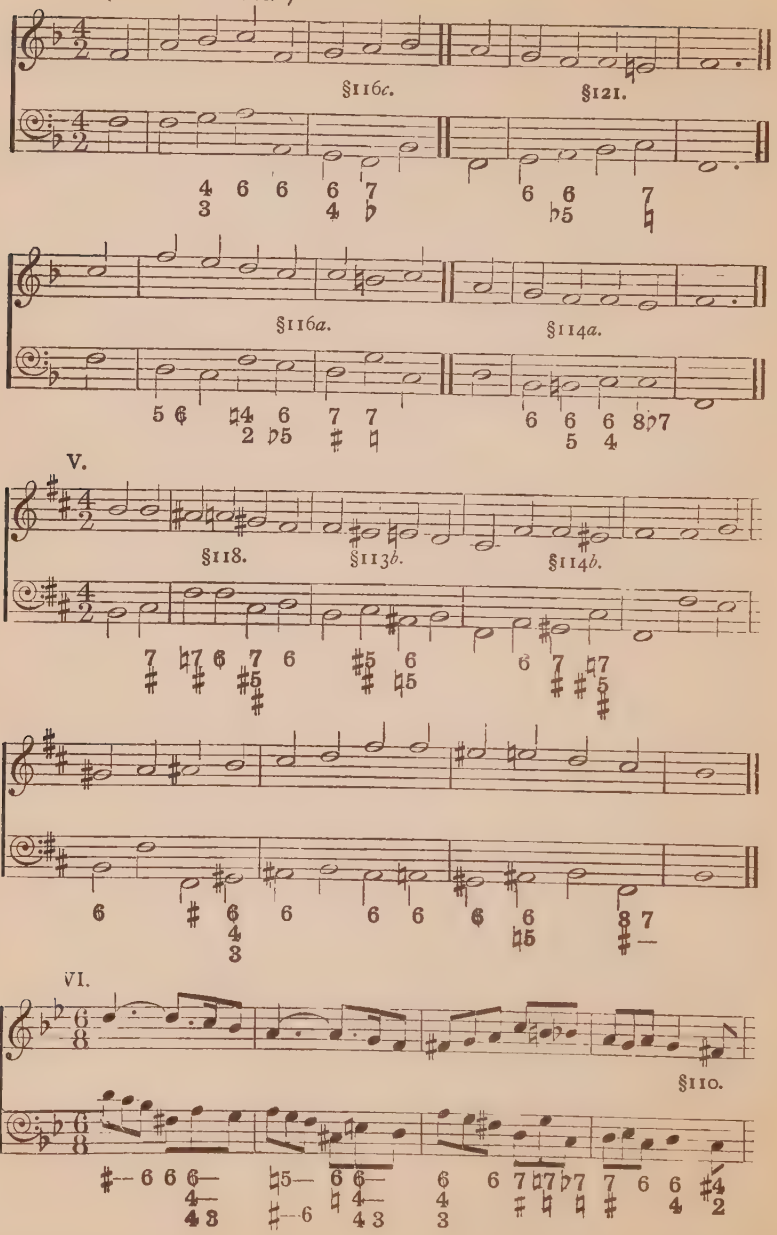


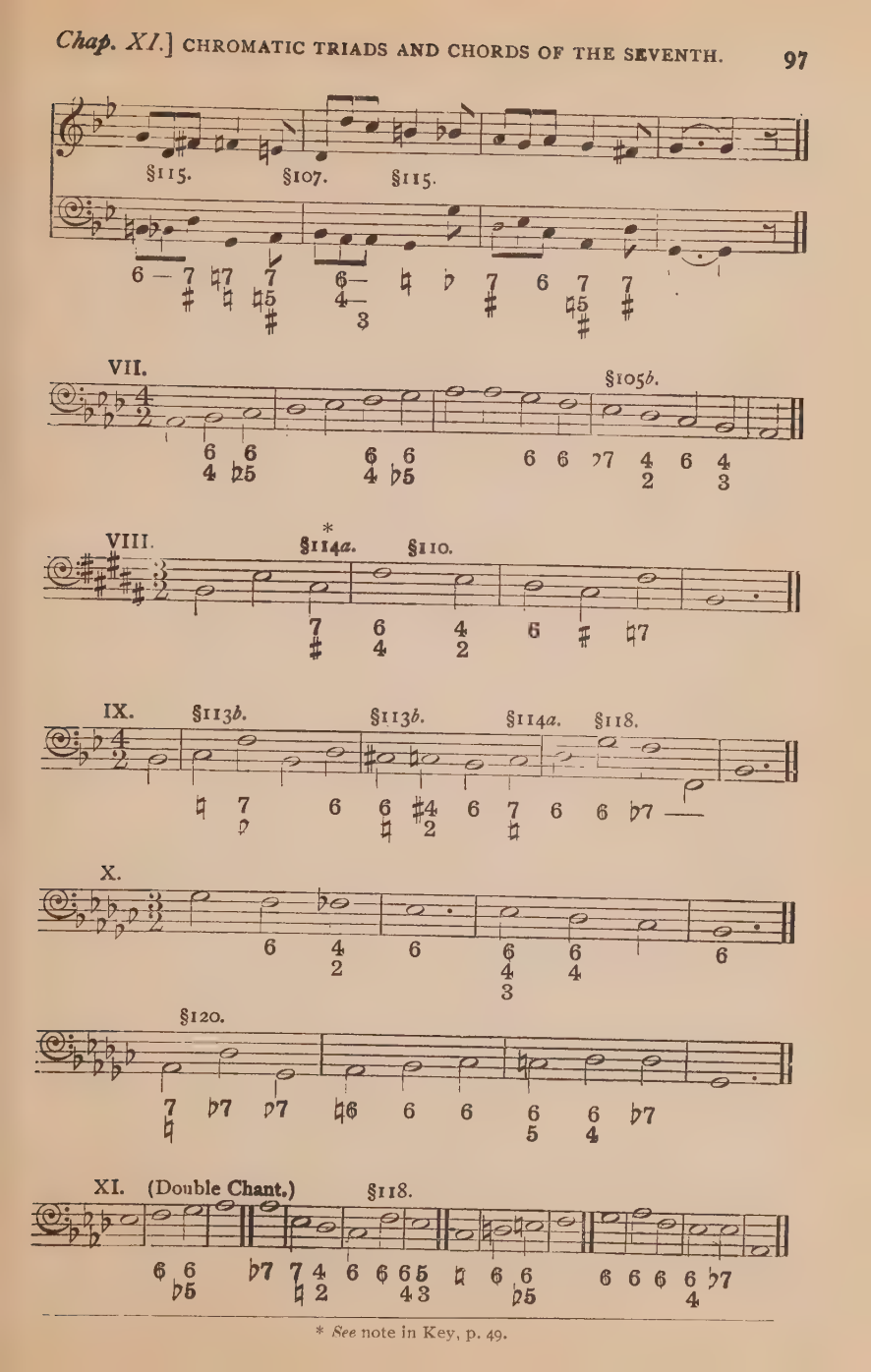
III. (Single Chant.)



* Chord of the augmented 6th. *Vide* Chapter XVII.

IV. (C.M.—"Dundee.")





* *See* note in Key, p. 49.

XII. §49.

§120.

Melodies.

The notes marked with an asterisk may be treated as part of some chromatic chord on the tonic or the supertonic.

I.

§116*b*. §114*a*.

II.

§115. §114*b*. §114*b*.

III. (Single Chant.)

§116*a*. §114*b*.

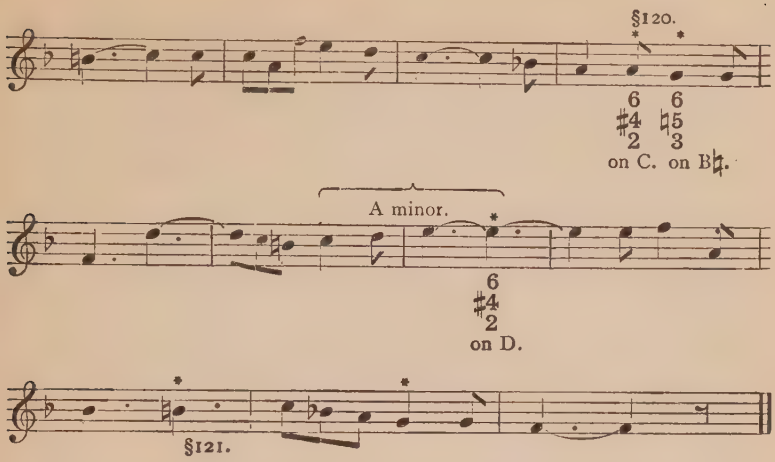
IV. (Double Chant.)

B minor.

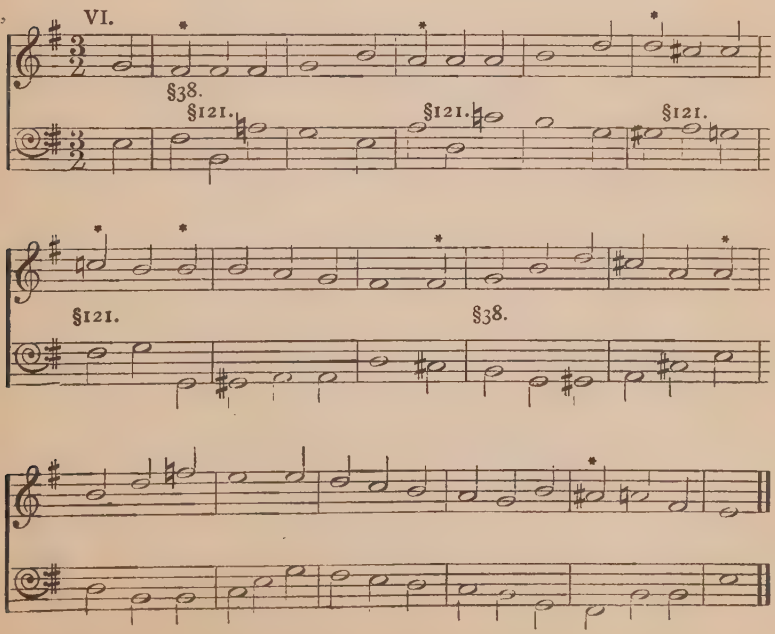
6 3 on F♯. 7 ♯ on C♯ §120

V.

§116*b*.

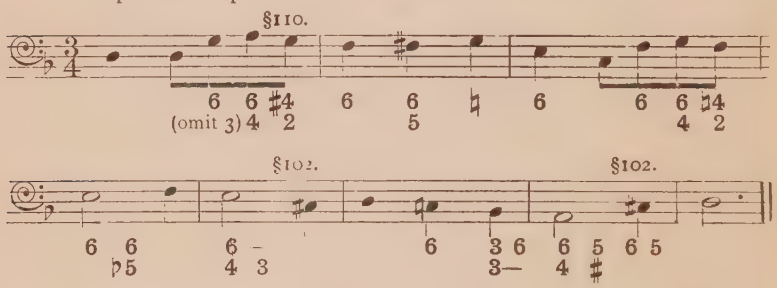


The student should fill up the following unfigured bass, inserting such harmonies as are suggested or warranted by the parts given, and figuring the bass accordingly.

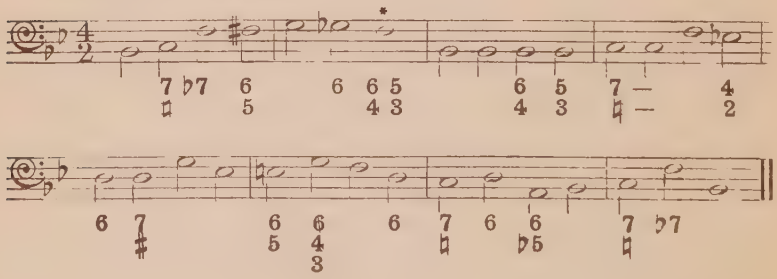


An attempt should now be made to harmonize some of the preceding melodies in three and five parts, and also in four parts with the melody in the tenor. In five-part harmony we may double any note which has not a compulsory progression, such as the 5th and the root in chords of the 7th. (*See Appendix.*) The easiest and most effective disposition of the parts in this case is secured by writing for two trebles, an alto, a tenor and a bass. Crossing the parts (§33) should rarely be permitted. In three parts the chords must be as complete as possible. The 5th in the common chord has frequently to be omitted; as also the root (§101*c*, *d*), the 5th (§98), or sometimes the 3rd (§99) in the chord of the dominant 7th. The parts must be kept as equidistant as possible, the wider interval being still between the bass and the next upper part. The basses of some of the preceding and following exercises should be written down without figuring, and then filled up and figured with the student's harmonies, in order that he may acquire facility in adding parts to unfigured basses.

Fill up in three parts :—



Fill up in five parts :—

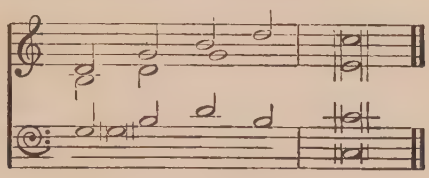


* The 4th from bass may be doubled, one 4 going to 5, the other to 3. (*See Appendix* pp. 273-4.)

CHAPTER XII.

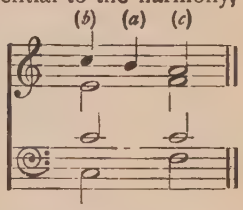
Bye Tones; Passing and Auxiliary Notes; Changing Notes and Anticipations.

122.—If, over a stationary bass, one or more of the upper parts move from one to another interval of the same chord, the notes formed by the moving parts are termed bye tones, *e.g.*,



In writing bye tones, the rule given in §39 must be most carefully observed. An interesting example of the employment of bye tones is to be found in the opening bars of Schumann's "Etudes Symphoniques."

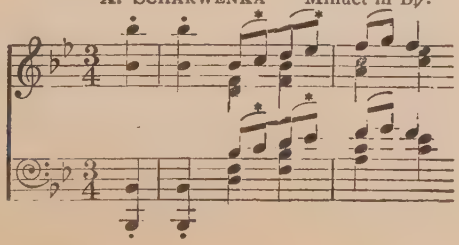
123.—A **passing note** (*a*) is a note not essential to the harmony, but connecting two harmony notes (*b*, *c*) generally distant a 3rd from each other. Observe that the passing note has a *different* degree of the scale on *both* sides of it, and (with the exception stated in §131) *is approached and quitted conjunctly.*



In the following examples the passing notes are marked with an asterisk. The student should observe how they confirm the rules laid down in the text.

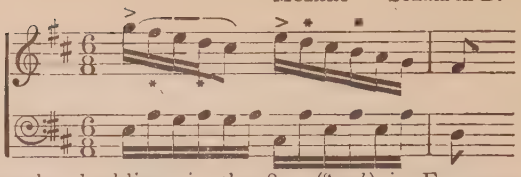
X. SCHARWENKA—"Minuet in B♭." Op. 18.

Ex. 100.



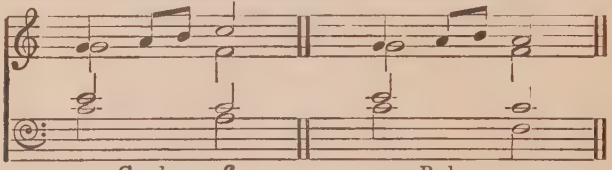
MOZART—"Sonata in D."

Ex. 101.



Observe the doublings in the 8ve (§32*b*) in Ex. 100, and in Ex. 101 the harmony of the dominant 7th expressed in an arpeggio figure and not in a chord.

124.—Sometimes the harmony notes between which passing notes occur are distant a 4th from each other. In this case the first passing note will be followed by another, which will, of course, proceed in the *same* direction until the harmony note is reached, *e.g.*,



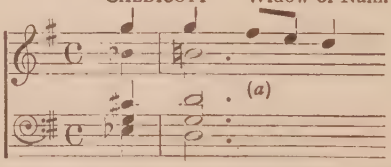
Good. 6 Bad.

This rule holds good when two or more chromatic passing notes are inserted between the harmony notes. In no case can the second of two contiguous unessential notes return to the first, as occurs in the second example above. Here, although the quavers A and B simulate the appearance of two passing notes, the A must be looked upon as an anticipation (§133) of the A minim.

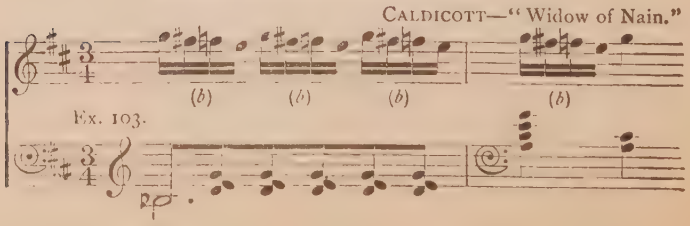
An example of two passing notes proceeding upwards between two harmony notes may be found in the last two notes of the first bar of Ex. 67. Here the C♯ is a chromatic passing note. At *a*, Ex. 102, we have two descending diatonic passing notes; at *b*, Ex. 103, two descending chromatic passing notes; and at *c*, Ex. 104, two ascending diatonic passing notes, D and E.

CALDICOTT—"Widow of Nain."

Ex. 102.



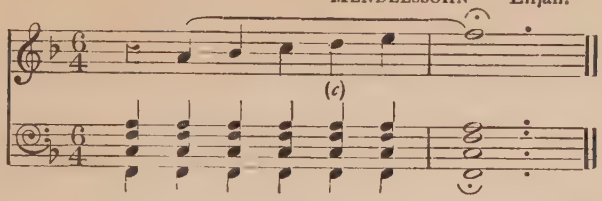
CALDICOTT—"Widow of Nain."



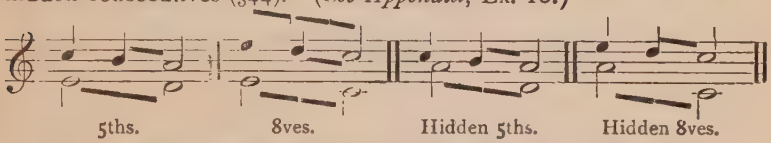
Ex. 103.

MENDELSSOHN—"Elijah."

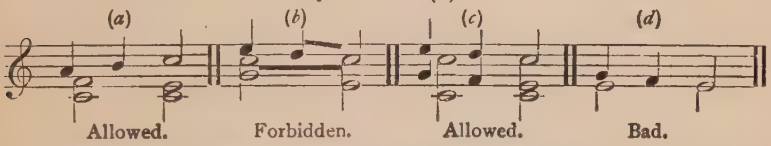
Ex. 104.



125.—In vocal music passing notes may not produce forbidden consecutives (§31), nor can they disguise the bad effect of real or hidden consecutives (§44). (*See Appendix*, Ex. 10.)



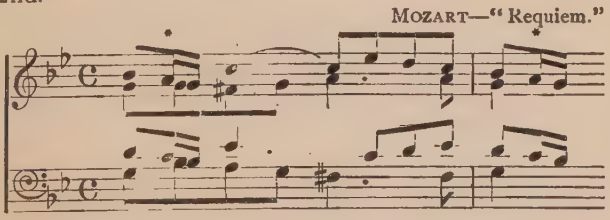
126.—Passing notes may proceed conjunctly to the 8ve (*a*), but not to the unison (*b*) (at least in vocal music), unless more than one part contains passing notes (*c*). Proceeding to the unison from a minor 2nd should be carefully avoided (*d*).



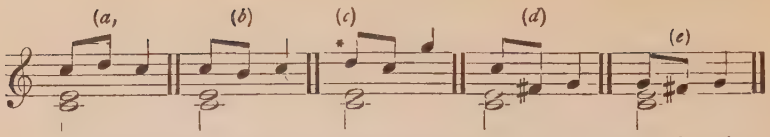
Examples of passing notes proceeding conjunctly to the 8ve are to be found between the second and third and fifth and sixth notes of the melody of Ex. 104. We now give an example of passing notes in two parts, both notes proceeding to the unison, but by a major, not a minor 2nd.

MOZART—"Requiem."

Ex. 105.



127.—An **auxiliary note** is one which is foreign to the harmony, usually occurs between two harmony notes, and is situated a 2nd above or below the harmony note by which it is followed (*a*, *b*). It differs from a passing note (§123) because it need not have a different degree of the scale on both sides of it (*c*), need not be approached conjunctly (*d*), but, if approached by step, must have the ***same*** degree of the scale on both sides of it (*a*, *b*, *e*).

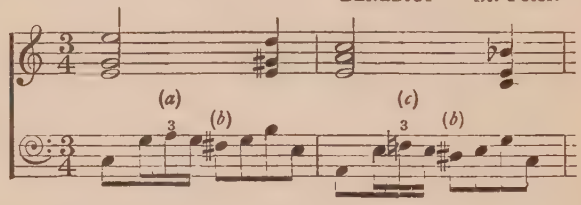


The exceptional cases in which an auxiliary note is quitted by skip, are described in §§131 & 132, and in the notes on §127 to be found in the Appendix.

We will now confirm these rules by extracts from the works of two modern composers.

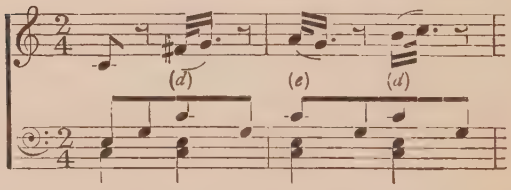
BENEDICT—"St. Peter."

Ex. 106.



BENNETT—"May Queen."

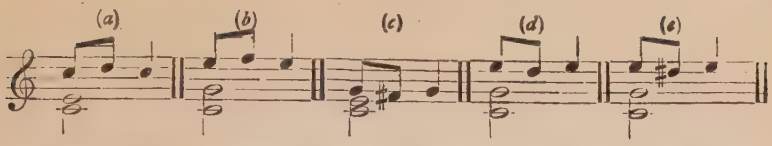
Ex. 107.



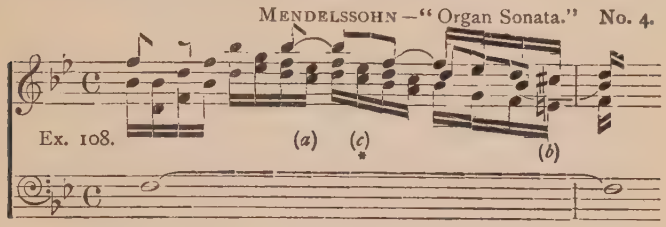
At *a*, Ex. 106, we have an auxiliary note, A, the next degree of the scale above the harmony note G. But at *c* the auxiliary note is F, a semitone above the harmony note E, because the passage at that point is in the key of A minor (§128 *a*, *b*). At *b* the auxiliary note is a semitone below the harmony note. Both *a*, *b*, and *c* have the same harmony note on both sides of them, but at *d*, Ex. 107, the auxiliary (really an appoggiatura) is approached by skip, and consequently has not the same degree of the scale on both sides of it. At *e* we have an upper auxiliary occurring upon the beat.

128.—If an auxiliary note be above the harmony note, it should be the next note in the scale in which the passage is written (*a*, *b*); but if below the harmony note the general custom in modern music is to make it a *diatonic semitone below* (*c*), with the exception of the 3rd of a major scale which may have an auxiliary note a tone or semitone below it (*d*, *e*). *See Appendix.*

* The auxiliary note at *c* (which, it should be observed, is not preceded by any degree of the scale) is really an appoggiatura; in fact all appoggiaturas when foreign to the harmony are either passing or auxiliary notes, and the upper and lower notes of turns and shakes, if unessential discords (§129*a*), are also auxiliary notes.



The following passage shows at *a* an auxiliary note a tone below, and at *b* an auxiliary note a semitone below the 3rd of the scale of B♭.



129.—In many respects passing and auxiliary notes closely resemble each other, *e.g.*,

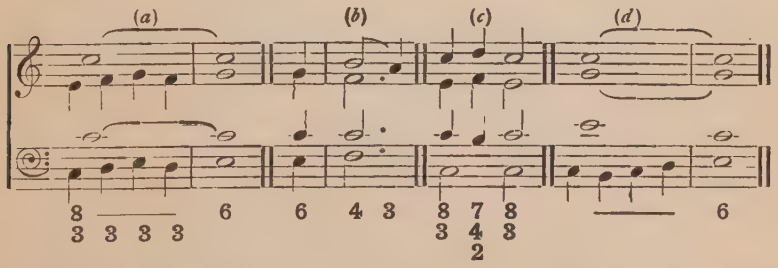
(*a*) They are both foreign to the harmony. Hence they are sometimes called **unessential discords.**

(*b*) They may occur in more than one part.

(*c*) They may occur upon either accented or unaccented beats. Passing notes on unaccented beats are termed **regular,** and those upon accented beats **irregular.**

(*d*) Passing and auxiliary notes may be shorter, longer, or of the same value as the succeeding harmony note.

(*e*) Passing and auxiliary notes are not generally indicated in the figuring unless moving in 3rds or 6ths with the bass in slow time (*a*), or occurring either on the accent (*b*) or in several parts (*c*). When in the bass they are denoted by the line ——— (*d*). (*Vide* §40.)



(*f*) They cannot make false relations (§41), although the notes a chromatic semitone apart may occur in different parts, either in the same chord or in two successive chords.

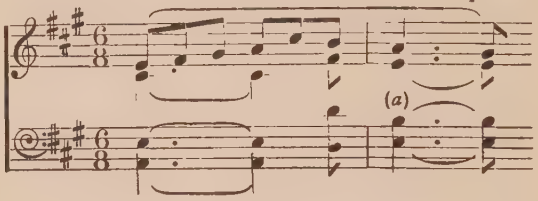
Several of these points have been already illustrated.

* (*c*) passing notes.

At *a*, Ex. 108, there are auxiliary notes in two parts, and upon the unaccented beats. At *d*, Ex. 107, the auxiliary is shorter than the harmony note and is placed upon the accent, while at *a*, Ex. 106, it is of the same value as the harmony note and occurs upon an unaccented beat. Passing notes in more than one part are to be found at *c*, Ex. 108, and at the asterisks in Ex. 105. We have now to illustrate passing and auxiliary notes on the accent, and those longer than the harmony note succeeding them, also examples of allowable false relation between passing and auxiliary notes.

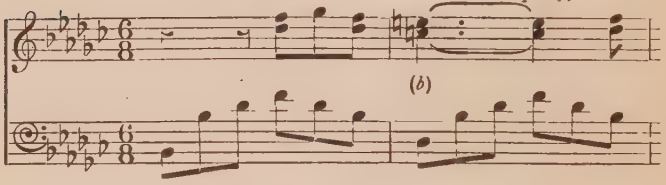
Ex. 109.

SCHUMANN—"Album." Op. 68.



Ex. 110.

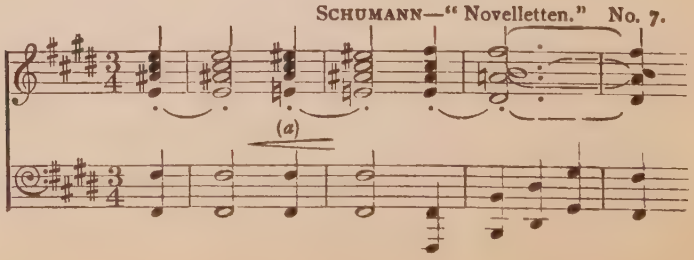
MOSZKOWSKI—"Tarantelle." Op. 27, No. 2.



At *a* we have a passing note (upon the accent) longer than the succeeding harmony note. At *b* an auxiliary note, or rather two auxiliary notes, longer than the harmony note following, also occur on the accent. In Ex. 109 observe the passing note proceeding conjunctly to the 8ve in the first bar, and in Ex. 110 notice the chord of B♭ minor expressed in arpeggio. Ex. 111, *a*, shows allowable false relation by a passing note, E♯; and Ex. 112, *b*, shows the same license in the case of an auxiliary note, B♮.

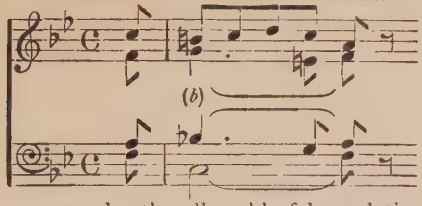
Ex. 111.

SCHUMANN—"Novelletten." No. 7.



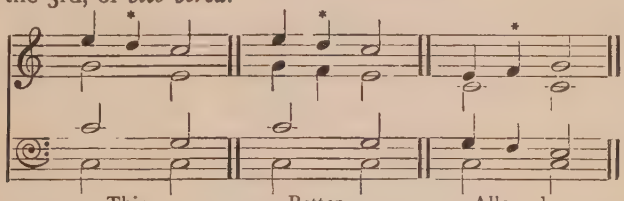
SCHUBERT—"Minstrel's Treasure."

Ex. 112.

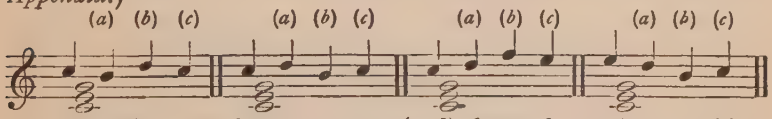


In the above examples the allowable false relation is between two chromatic notes in different parts in the *same* chord.

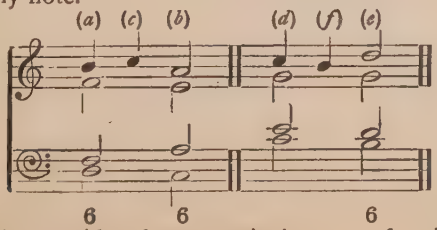
130.—In harmonizing melodies the student must be most careful to see that when the 3rd of a chord has moved away to a passing or to an auxiliary note, one of the parts moves in 3rds or 6ths with the latter. This rule is, however, often disregarded when one part proceeds conjunctly from the 3rd to the 5th of a chord, and another from the 5th to the 3rd, or *vice versâ*.



131.—Changing notes are formed by two auxiliary or passing notes (*a*, *b*), of which the first, instead of proceeding to its harmony note (*c*), leaps a 3rd in the direction and to the other side of the latter, to which the second auxiliary or passing note then proceeds. (*See Appendix.*)



132.—When two harmony notes (*a*, *b*) descend a 2nd, an auxiliary note (*c*) above the first is allowed to leap a 3rd to the second harmony note; and, conversely, when two harmony notes (*d*, *e*) ascend a 2nd, an auxiliary note (*f*) below the first is allowed to skip a 3rd to the second harmony note.



This may be considered as a particular case of anticipation (§133), but it is frequently regarded as a changing note.

The following examples show the employment of changing notes in compositions of different styles and periods.

C. E. STEPHENS—"Duo (2 Pianos)." Op. 4.

Ex. 113. (*a*) (*a*) (*a*) (*a*)

Ex. 114.

BACH—"Organ Fugue in G minor." Vol. VIII.†

(*b*) (*b*) (*b*) (*b*)

MOSZKOWSKI—"Tarantelle." Op. 27, No. 2.

Ex. 115. (*c*)

MENDELSSOHN—"Organ Prelude in C minor." No. 1.

Ex. 116. (*d*)

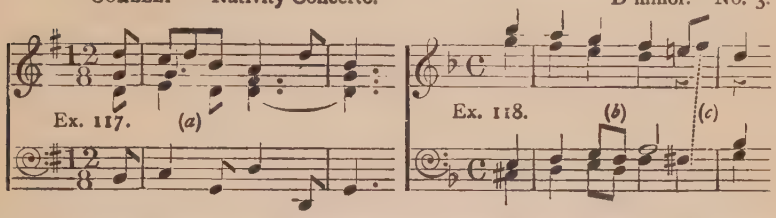
At *a*, Ex. 113, changing notes are formed by auxiliary notes (a semitone below the succeeding harmony notes) leaping up a 3rd and returning to the harmony note. At *b*, Ex. 114, the changing notes are formed by auxiliary notes leaping down a 3rd, and are in more than one part. At *c*, Ex. 115, changing notes are formed by a passing note (C) leaping up a 3rd and then returning to the harmony note. At *d*, Ex. 116, the process is reversed, the passing note (G) leaping down a 3rd. An auxiliary note (A) leaping down a 3rd to a harmony note (F♯) occurs

† Peters' Edition.

in the penultimate bar of Ex. 94. Ex. 117 shews (at *a*) the same progression; and at *b*, Ex. 118, we have the rarer instance of two auxiliary notes leaping up a 3rd. (*See Appendix.*)

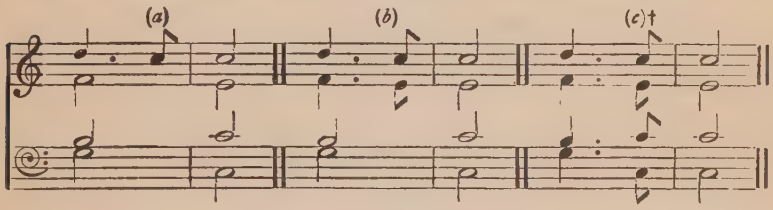
CORELLI—"Nativity Concerto."

MENDELSSOHN—"Organ Fugue in D minor." No. 3.



Observe the allowed false relation caused by the changing note at *c*, Ex. 118.

133.—Anticipation is the sounding of a part of a chord in the chord preceding, of which preceding chord the anticipated notes form no part. Sometimes one note of a chord is anticipated (*a*), sometimes two notes (*b*), and occasionally the whole chord (*c*). Anticipations are most frequently found at the cadence. (*See Appendix.*)

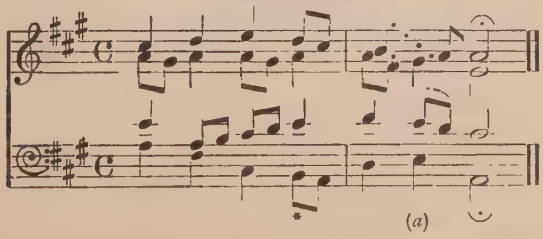


Notes are generally, but not always, anticipated and repeated in the same part. (*See Appendix.*)

Anticipations in two parts, treble and alto, may be seen in the last note of the penultimate bar of Ex. 94. We quote, however, two more examples of somewhat exceptional interest.

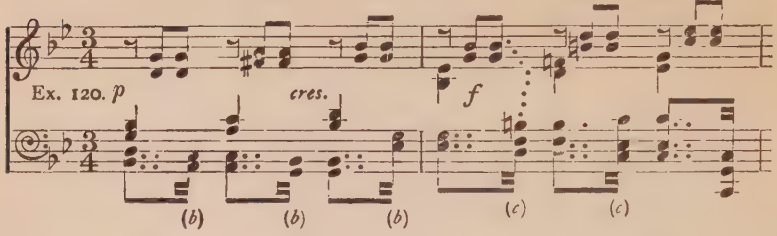
BACH—"Passion"—St. Matthew.

Ex. 119.



† Viewed as an anticipation, this would not be a transgression of the rule laid down in §47*h*.

CLEMENTI—Pianoforte Sonata—"Didone abbandonata.



At *a*, Ex. 119, one note only of the final chord is anticipated in the melody, thus causing 5ths with the tenor, a license which, as well as the descending leading note in the alto, is quoted, not for imitation, but as an instance of the great freedom of Bach's part progression. The asterisk draws attention to passing notes upon the first half of a beat. At *b*, Ex. 120, two notes, and at *c* a whole chord are anticipated in the lower parts. Note the false relation induced by the B♭ and B sounded simultaneously.

134.—It should now be evident to the student that, provided no law of part-writing be thereby transgressed,

(*a*) Auxiliary notes can be introduced in any part when such part contains repeated harmony notes, or harmony notes ascending or descending a 2nd (§132).

(*b*) Passing notes can be introduced in any part when such part contains two harmony notes a 3rd or even a 4th apart (§124).

(*c*) Changing notes can generally be introduced where auxiliary or passing notes would be possible.

(*d*) Anticipations can be introduced at the cadence in any part that proceeds conjunctly.

QUESTIONS ON CHAPTER XII.*

1.—What are bye tones, when may they be introduced, and what rule must be carefully observed in their employment?

2.—What is a passing note, when can it occur, what has it on both sides of it, and how must it be approached and quitted?

3.—Can two passing notes be employed when distant a 2nd from each other, and when distant a 3rd, and what name is given to the latter notes?

4.—To what limitation is the introduction of passing notes subject?

5.—What is an auxiliary note?

6.—Name four points of difference between passing and auxiliary notes.

* In addition to working the questions and exercises now given, the student should add passing notes etc., to exercises previously worked, and reharmonize some of the more florid melodies, endeavouring to treat some of the shorter notes as unessential discords.

7.—Give the rules for the correct introduction of auxiliary notes above and below the harmony notes, and state the exception to the latter rules.

8.—By what names are passing and auxiliary notes sometimes called?

9.—What musical ornaments and embellishments are really auxiliary notes?

10.—Name six points of resemblance between passing and auxiliary notes?

11.—What are regular and irregular passing notes?

12.—How are unessential discords figured when occurring in the bass?

13.—Give a rule for the avoidance of thinness when introducing passing or auxiliary notes.

14.—What are changing notes?

15.—Can an auxiliary note ever be quitted by leap?

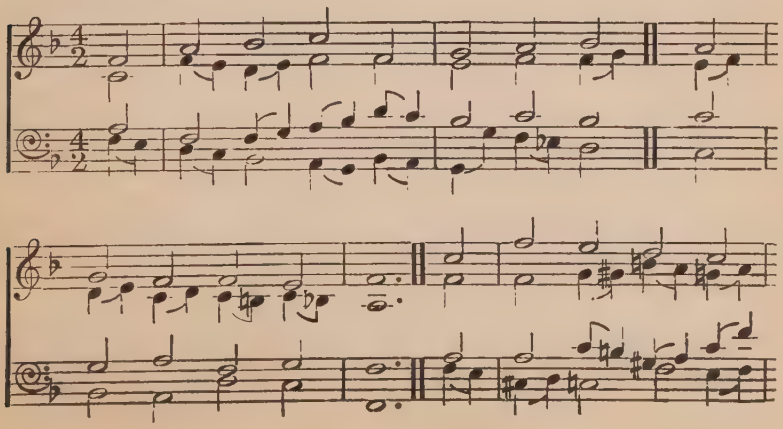
16.—What is an anticipation, where does it most frequently occur, and of how many notes may it consist?

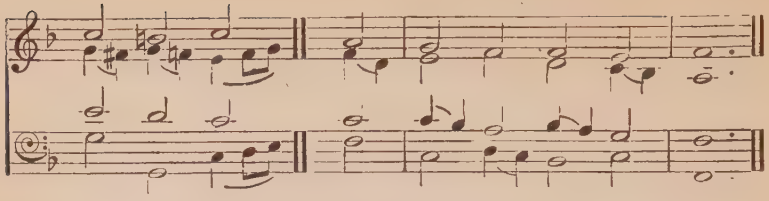
17.—State when the introduction of anticipations, passing notes, auxiliary, or changing notes is possible.

18.—Must the anticipated note always be essential to the harmony of the succeeding chord?

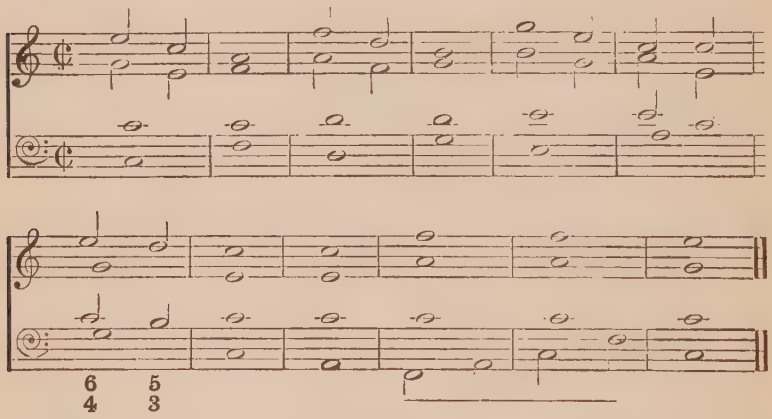
Exercises on Chapter XII.

Point out auxiliary, passing, and changing notes in the following, and figure the bass:—

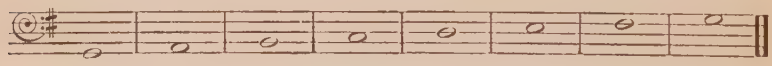




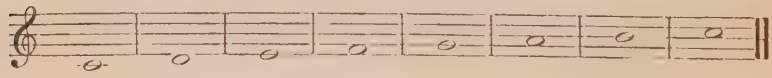
Introduce passing and auxiliary notes, changing notes, and anticipations, in any parts :—



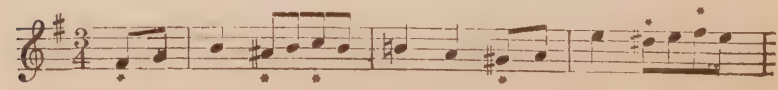
Add three upper parts, keeping up crotchet movement in every bar except the last :—

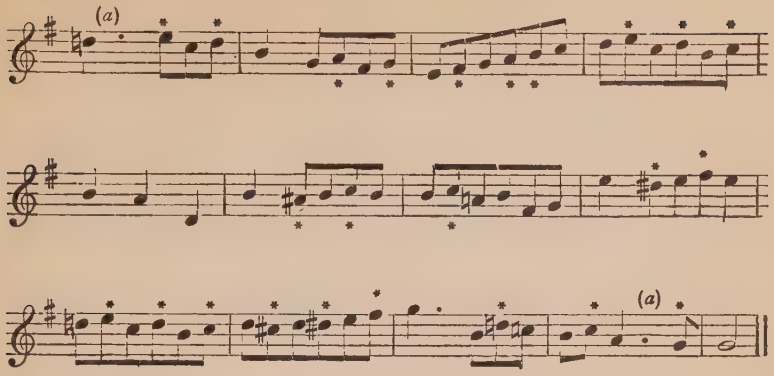


Harmonize in four parts, keeping up crotchet movement in every bar except the last :—

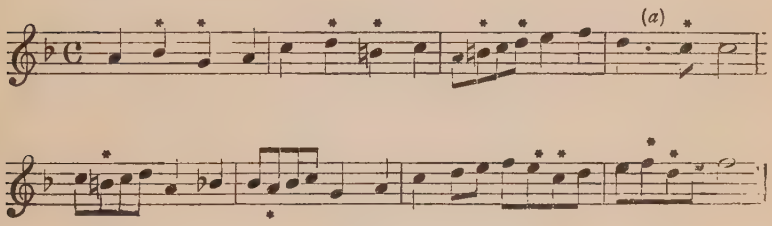


Harmonize in four parts, treating the notes marked * as passing, auxiliary, or changing notes :—





Harmonize as before :—

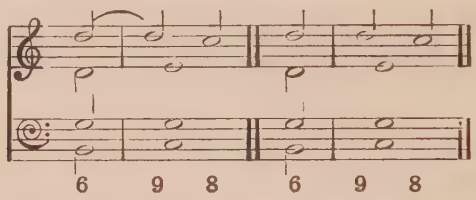


(*a*) A chord to be placed upon the beat.

CHAPTER XIII.

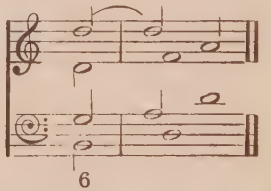
Suspensions.

135.—A **suspension** is a note which, having formed an essential part of a chord upon an unaccented beat, is sustained or repeated over a second chord usually placed upon an accented beat, of which second chord *the suspended note forms no part whatever.* (*See App.* p. 293.)



Here D, in the upper part of the chord upon the unaccented part of the bar, is sustained or repeated over the next chord which occurs upon the accent. Of the first chord D is an essential note; of the second it forms no part whatever, there being no D in the common chord of C.

136.—A suspended note differs from a mere syncopation,* because the latter may or may not be essential to the chord over which it is sustained: *e.g.*, the D in the second chord of the first of the above examples is both suspended and syncopated, but the D in the second chord of the following example is a syncopation *only*, because it forms part of the chord over which it is sustained.



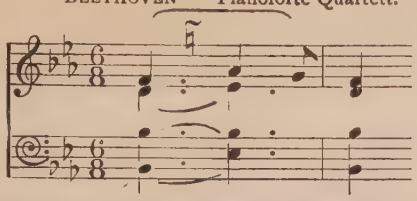
137.—A suspended note may be distinguished from an auxiliary note (§127) or a passing note (§123) because, while all three form unessential discords (§129), *a suspended note requires preparation* (§74) *in the same part, and can only occur upon an accented beat* (§129*c*) as in the example given in §135. The note A♮ in the second chord of the following example is therefore not a suspended note, but an auxiliary note; because, although it occurs upon the secondary accent, it is not prepared in the same part. Similarly, the A in the melody of the final bar of Ex. 109 is not a suspension, but a passing note.

---

* *i.e.* a disturbing of the regular flow of accent by placing a long note on an unaccented beat and sustaining it over the accented beat, or by tying a note on an unaccented beat to one on the accent next following.

BEETHOVEN—"Pianoforte Quartett." Op. 16.

Ex. 121.



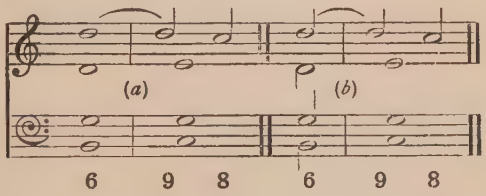
138.—Suspensions may be distinguished from fundamental discords (§89) because they are

(*a*) Foreign to the chords over which they are suspended.
(*b*) Prepared in the same part.
(*c*) Generally resolved upon the same root (§152).
(*d*) Placed upon accented beats.†

Whereas fundamental discords are

(*e*) Formed of essential notes.
(*f*) Not necessarily prepared.
(*g*) Generally resolved upon another root.
(*h*) Placed upon accented or unaccented beats.

139.—Although a suspension must occur upon an accented beat, the chord of preparation may be upon an accented (*a*) or an unaccented beat (*b*). The note of preparation, as already stated (§137), must be in the same part as the suspended note, must be essential to the chord to which it belongs,* and, if tied to the suspended note, should be of the *same* (*b*) or of *greater* (*a*) length than the latter. The resolution of a suspension usually falls upon an unaccented beat or upon a secondary accent.

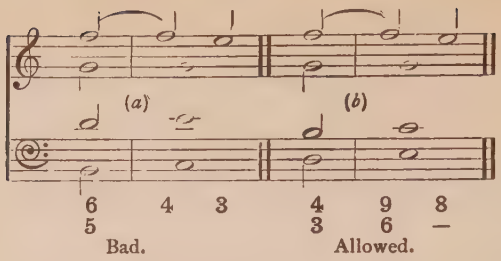


140.—Unless regarded as a retardation (§153) or ornamentally resolved (§150 *a*, *d*), a suspension resolves by *descending one degree* to a note essential to the chord over which the suspended note is sustained. Thus in the above example, D, the suspended note, descends one degree to C, a note essential to the chord over which D is heard.

141.—*The note upon which a dissonant note is about to resolve should not be heard in any other part* at the same time as the dissonant note, unless such note occur also in the bass. In the following example F is about to resolve on E; E should therefore not be heard in any upper part as at *a*, but may occur in the bass as at *b*. (*See Appendix.*)

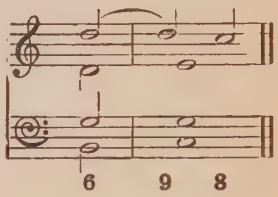
* Hence anticipations cannot prepare suspensions because the former are unessential notes (§133).

† Or, upon the stronger half of an unaccented beat.

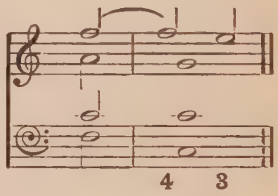


142.—The only intervals from the root of a chord which can really be regarded as suspensions* are

9 to 8, *i.e.*, the 8ve from the root of a common chord suspended by the 9th.



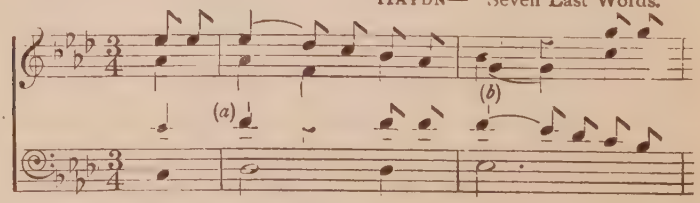
4 to 3, *i.e.*, the 3rd from the root of a common chord suspended by the 4th.



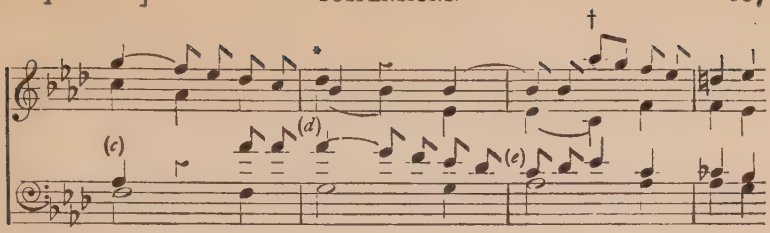
The following examples (exhibiting a 9 to 8 and 4 to 3 on almost every degree of the scale) will repay careful study. As the chord of resolution of these suspensions is a common chord (§§145*c*, 148*c*), it is evident that there can be no suspended 9th or 4th upon the 7th degree of a major scale, or upon the 7th, 2nd, or 3rd degrees of a minor scale, except in such cases as those in which a diminished or augmented triad may be used.

HAYDN—"Seven Last Words."

Ex. 122.

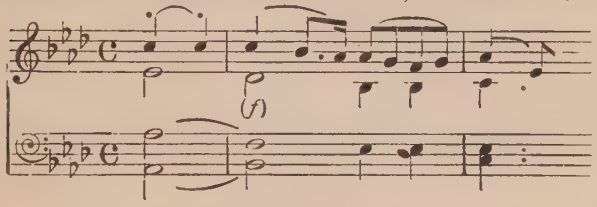


* *See Appendix.*



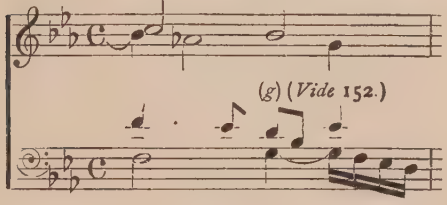
BEETHOVEN—"Sonata (Pianoforte and Violin) in C minor." Op. 30, No. 2.

Ex. 123.



BACH—"Prelude in E♭." (Wohltemperirtes Clavier, Book I.)

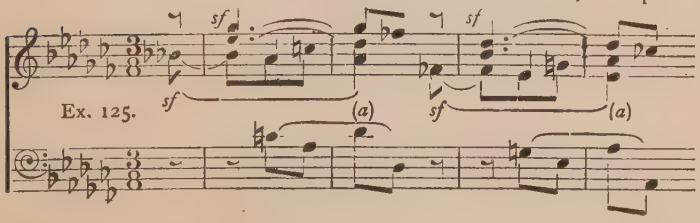
Ex. 124.



(*a*) 9 to 8 on subdominant.
(*b*) 9 to 8 on dominant.
(*c*) 9 to 8 on submediant.
(*d*) 9 to 8 on leading note (rare).*
(*e*) 9 to 8 on tonic.
(*f*) 9 to 8 on supertonic.
(*g*) 9 to 8 on mediant (rare).

BEETHOVEN—"Sonata in A♭." Op. 26.

Ex. 125.



* Really a dominant 11th in its first inversion resolving upon its own root (§174).

† Here, by a skip of a 7th instead of a descent of a 2nd, the note of resolution is made to appear in a higher octave than the suspended note.

MACFARREN—"St. John the Baptist."

Ex. 126.

(*b*)

HANDEL—"St. Cecilia's Day."

Ex. 127.

(*c*) (*d*)

(*e*)

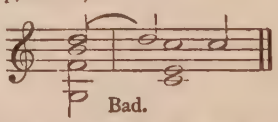
(*a*) 4 to 3 on tonic. (*c*) 4 to 3 on supertonic.
(*b*) 4 to 3 on subdominant. (*d*) 4 to 3 on submediant.
(*e*) 4 to 3 on dominant.

The 4 to 3 on the mediant is extremely rare, but an example in a major key is to be found at *e*, Ex. 136.

143.—The student will now observe that

(*a*) A suspended 9th or an essential 9th (Chap. XIV.) is the only compound interval used in thorough bass (§22), with the exception of a passing or auxiliary 9th when figured.

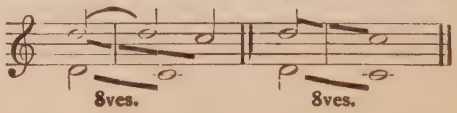
(*b*) Every 9th must be nine notes distant from its root. It cannot occur as a 2nd, or as a 2 to 1. (*See Appendix.*)



Bad.

(*c*) The suspension 9 to 8 implies a 5th and a 3rd from the root, the 4 to 3 implying a 5th and an 8ve, or a doubled 5th.

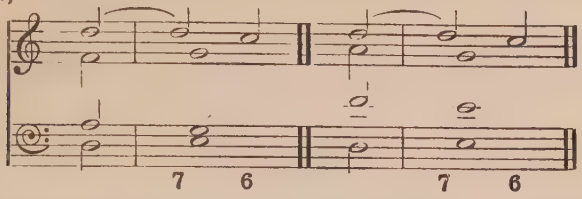
(*d*) The 9th cannot be prepared by an 8ve, because suspensions do not save the consecutives which would appear were the suspensions removed. (*See Appendix.*)



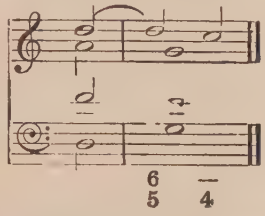
8ves. 8ves.

144.—The suspension 9 to 8 admits of three inversions, viz.,

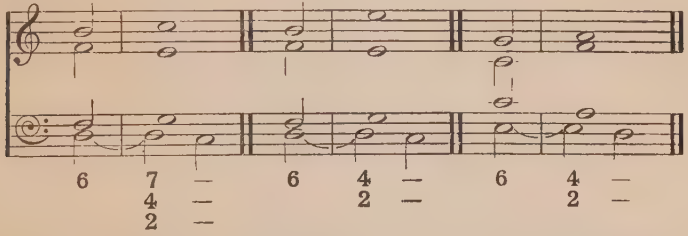
(*a*) The first inversion (having the 3rd from the root in the bass), figured 7 6, implying a 3rd and a doubled 8ve or 3rd of the bass note, *but not a 5th.* (*See Appendix.*)



(*b*) The second inversion (having the 5th from the root in the bass) figured $\frac{6}{5}\,\frac{}{4}$, implying an 8ve of the bass note, *but not a 3rd.*



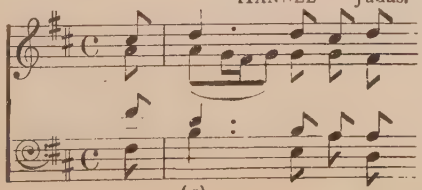
(*c*) The third inversion (having the suspended 9th in the bass) figured $\frac{4}{2}$ or $\frac{7}{2}$; $\frac{4}{2}$ implying a doubled 2nd or 4th from the bass, *but not a 6th.*



An illustration of the 7 6 with the 3rd from the root doubled is to be found in the first chord of the fifth bar of Ex. 127. We now give an example with the 5th from the root doubled (Ex. 128*a*), also an example of the second inversion of the 9 to 8 (Ex. 129*b*), and an example having the suspended 9th in the bass and the root in an upper root part (Ex. 130*c*).

HANDEL—"Judas."

Ex. 128.



(*a*)

HAYDN—"Quartett." Op. 76, No. 3.

Ex. 129.

(*d*) (*b*)

LISZT—"Consolations." No. 4.

Ex. 130.

(*c*) (*c*)

Observe the second inversion of the 9 to 8 at *d*, Ex. 129, with the root in an inside part, in opposition to §145*a*.

145.—From a careful study of the preceding section, it will now be evident that

(*a*) Except in the first of the three optional forms of the third inversion of the 9 to 8, all the inversions omit the root (in accordance with §141), thus affording us another example of a chord whose root is sometimes omitted (§102).

(*b*) In the inversions of the 9 to 8, the doubled note is either a 3rd or a 5th from the root, except in the first form of the third inversion.

(*c*) The chords produced by the resolution of the 9 to 8 and its inversions are the common chord and its inversions. (*See Appendix*, page 293.)

146.—By this time the student will doubtless have come to the conclusion that figures afford no real clue to the root of a chord, but are simply a species of musical shorthand, denoting certain intervals from the bass, the same figures being used to indicate totally different chords, *e.g.*,

7, when placed under the dominant, denotes the chord of the dominant 7th, and implies a 5 and a 3 (§95).

7, when placed under the mediant, denotes the first inversion of the 9 to 8 on the tonic and implies a 3 but not a 5 (§144*a*).

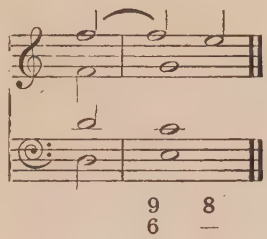
$\frac{6}{5}$, when placed under the leading note, denotes the first inversion of the dominant 7th and implies a 3 (§95).

$\frac{6}{5}\frac{-}{4}$, when placed under the dominant, denotes the second inversion of the 9 to 8 on the tonic and does not imply a 3 (§144*b*).

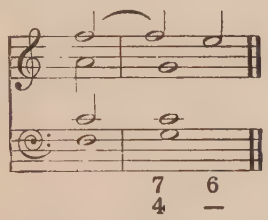
The *quality* of the intervals implied by these figures varies according to the chords they are intended to denote, *e.g.*, a dominant 7th implies a major 3rd, a minor 7th, and a perfect 5th; but 7, used as the figuring of the first inversion of a 9 to 8 on the tonic, implies a minor 3rd and 7th, but no 5th.

147.—Like the 9 to 8, the suspension 4 to 3 admits of three inversions, viz. :—

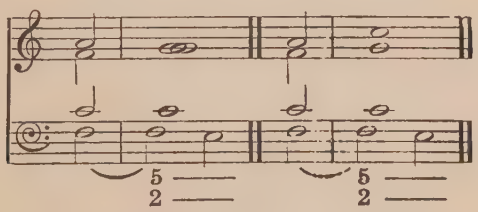
(*a*) The first inversion which (having the 3rd from the root in the bass) is figured $\frac{9}{6}$ $\underline{8}$, implying a 3.



(*b*) The second inversion which (having the 5th from the root in the bass) is figured $\frac{7}{4}$ $\underline{6}$ and implies an 8ve of the bass note.



(*c*) The third inversion which (having the suspended 4th in the bass) is figured $\frac{6}{2}$, implying a doubled 2nd or 5th from the bass note.



148.—From the foregoing examples we infer that

(*a*) Except in the first inversion of the 4 to 3, when the 3rd from the root occurs in the bass, the 3rd is omitted in all the inversions in accordance with §141.

(*b*) In the inversions of the 4 to 3 the doubled note is, with the exception of the first inversion, either the root or its 5th.

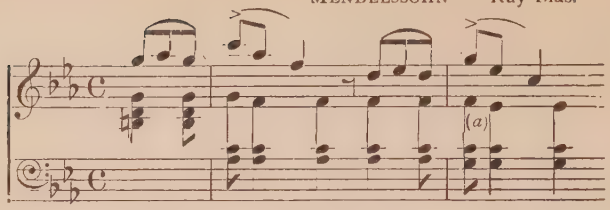
(*c*) The chords produced by the resolution of the 4 to 3 are the common chord and its inversions. (*See Appendix*, page 293.)

The first inversion of the suspended 4th may be seen in the third bar of Ex. 126.* At *a*, Ex. 131, we have the second inversion, and at *b*, Ex. 132, the suspension itself is in the bass.

* A similar example may be found five bars from the end of Handel's Chorus, "His yoke is easy" (Messiah).

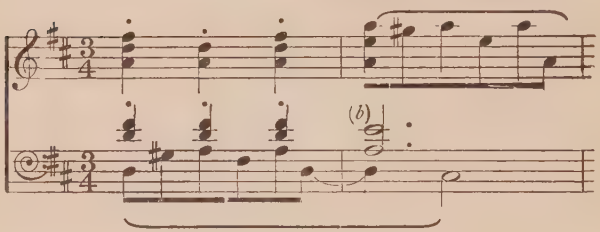
MENDELSSOHN—"Ruy Blas."

Ex. 131.



SMART—"Postlude in D.

Ex. 132.

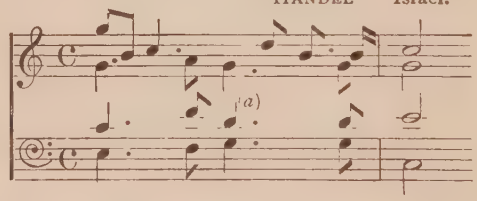


149.—*Suspensions may occur in any part*, not necessarily the outside parts; but, having compulsory progressions, *they cannot be doubled.*

150.—Suspensions, like dominant 7ths (§105*a*) and other fundamental discords (§89), may be *ornamentally resolved.* We give a few examples :—

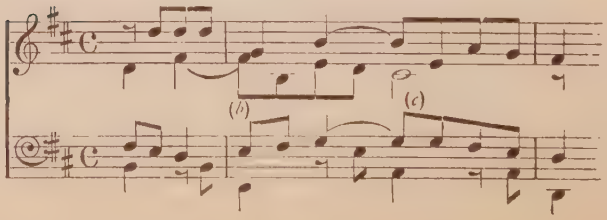
HANDEL—"Israel."

Ex. 133.



BACH—"Fugue in D." Wohltemperirtes Clavier, Book II.

Ex. 134.



SCHUBERT—"Grand Duo." Op. 140.

Ex. 135.

(*a*)

PROUT—"Magnificat." Op. 7.

Ex. 136.

(*e*)

BEETHOVEN—"Sonata in C minor." Op. 10, No. 1.

Ex. 137.

(*f*)

PARRY—"Judith."

Ex. 138.

(*g*) (*g*)

BEETHOVEN—"Variations." Op. 35.

Ex. 139.

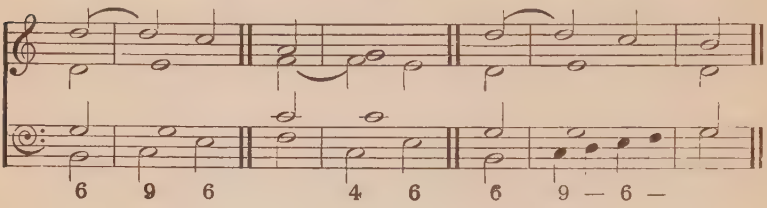
(*h*)

p *sf*

At *a*, in the above examples, the suspension (C in the melody) ascends to another harmony note (and at *b* and *c* descends to another harmony note) before proceeding to its note of resolution. At *d* the suspension proceeds to another harmony note and then leaps down to an auxiliary note before proceeding to its note of resolution. At *e*—an example of the somewhat rare 4 to 3 on the mediant—we have this order—suspension, note of resolution, and lower auxiliary. At *f* the suspension falls to an auxiliary note a semitone below the note of resolution. At *g*

changing notes are interpolated between the suspension and its resolution. At *h* the note of resolution (D) leaps a 3rd and returns conjunctly to a note of the same name. (*See Appendix*, p. 292.)

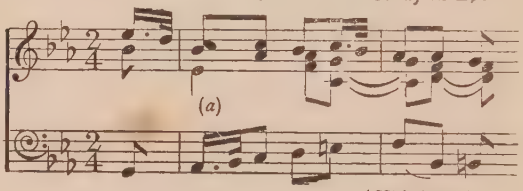
151.—Sometimes the bass of a suspension moves to another interval of the *same* chord before the resolution of the suspension, *e.g.*,



We give two illustrations of these resolutions :—

CRAMER—"Study in E♭."

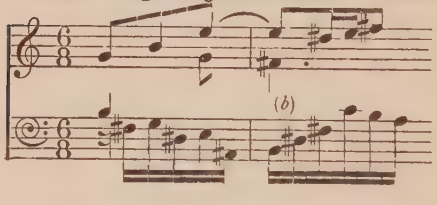
Ex. 140.



(*Vide* §152.)

BACH—"Organ Fugue in A minor." Vol. II.†

Ex. 141.

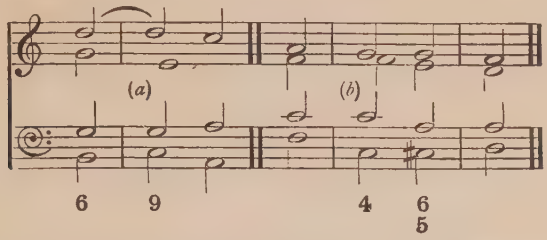


At *a* the suspended 9th on the subdominant resolves upon the first inversion of its root. At *b* the suspended 4th on the dominant resolves upon the second inversion of that chord.

152.—When, however, the bass of a syncopated unessential discord moves to the root or some other interval of *another* chord, instead of to another interval of the *same* chord (§151), or, to put it in other words, when the syncopated note resolves upon a different chord from that over which it was primarily suspended, some writers do not regard the syncopated note as a legitimate suspension. Hence, in the following example, *a* might not be regarded as a suspended 9th, nor *b* as a

† Peters' Edition.

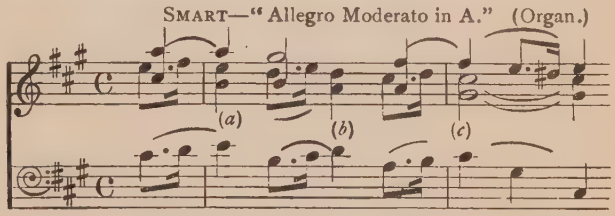
suspended 4th, because both 9th and 4th resolve upon chords having roots different from those of the chords over which the syncopated notes were first introduced. But we prefer to regard *a* and *b* as legitimate suspensions, if only for the sake of simplicity.*



In Ex. 124 the suspended 9th on the mediant resolves upon the first inversion of the tonic chord, and in the third bar of Ex. 140 we have the suspended 9th on the supertonic resolving upon the dominant 7th. We now give an example of a most interesting character :—

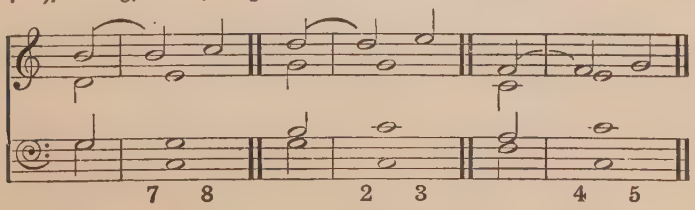
SMART—"Allegro Moderato in A." (Organ.)

Ex. 142.



At *a* and *c* the suspended 4ths resolve on *different basses* but in both cases the root of the chord of resolution is the same as that of the suspension. At *b*, however, the suspended 4th on the subdominant resolves on the first inversion of the submediant triad, *i.e.*, on a *different bass* and a *different root.*

153.—A **retardation** may be defined as a suspension which resolves by *ascending* instead of descending one degree. The principal retardations are 7 to 8 (*i.e.*, the 8ve of the common chord delayed by the 7th), 2 to 3, and 4 to 5.



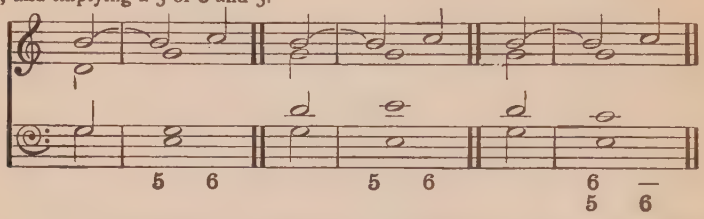
Of the above the two latter are somewhat rare.

* The student should now answer questions 1-35 at the end of this chapter, and also work the figured basses on the 9 to 8 and 4 to 3.

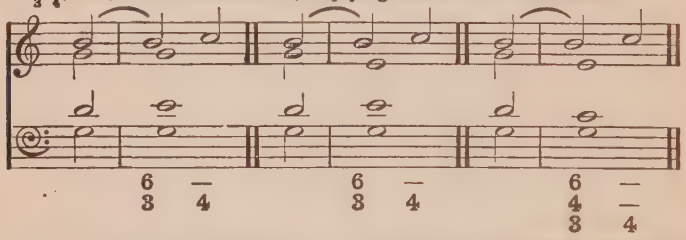
154.—In its root position, the 7 to 8, like the 9 to 8, implies a 5 and a 3 (143*c*), the 2 to 3 implies a 5 and an 8, and the 4 to 5 an 8 and a 3.

155.– The 7 to 8 admits of three inversions, viz. :—

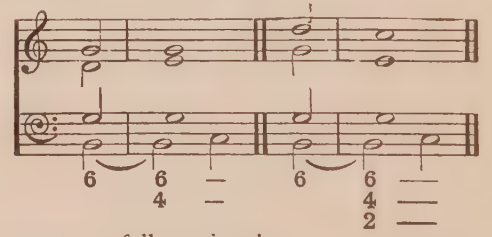
(*a*) The first inversion (having the 3rd from the root in the bass) figured 5 6 or $\frac{6}{5}$ $\frac{-}{6}$, and implying a 3 or 8 and 3.



(*b*) The second inversion (having the 5th from the root in the bass) figured $\frac{6}{3}$ $\frac{-}{4}$, or $\frac{6}{\frac{4}{3}}$ $\frac{-}{\frac{-}{4}}$, and, in the first instance, implying an 8ve of the bass note.

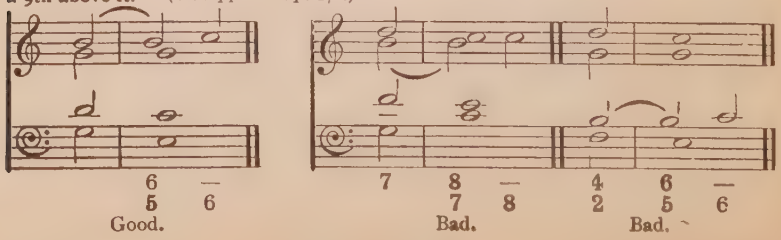


(*c*) The third inversion (having the retarded 7th in the bass) figured $\frac{6}{4}$ $\frac{-}{-}$, or $\frac{6}{\frac{4}{2}}$ $\frac{-}{\frac{-}{-}}$, and, in the first instance, implying a 6.



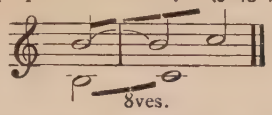
156.—We must carefully notice that

(*a*) The root of the retarded 7th may be admitted in the inversions, but it must always be at the interval of a 7th below the retardation, and never a 2nd or a 9th above it. * (*See Appendix. p.* 278.)



* Unless as in §155c.

(*b*) The 8ve cannot prepare a retarded 7th (§143*d*).



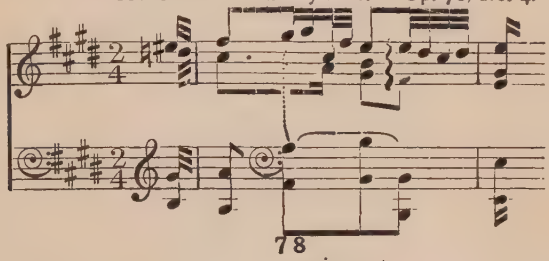
(*See Appendix.*)

(*c*) The chords produced by the resolution of the 7 to 8 and its inversions are the common chord and its inversions.

Before proceeding to illustrate the foregoing sections we would warn the student against confounding passing and auxiliary notes with retardations, which latter must be prepared (§137). Of each of the former we give examples which, we think, need no comment.

MOSCHELES—"Study in E." Op. 70, No. 4.

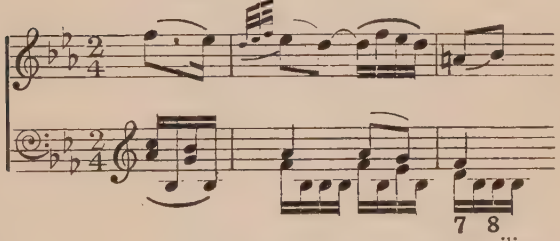
Ex. 143.



as a passing note.

BEETHOVEN—"Sonata in E♭." Op. 7.

Ex. 144.

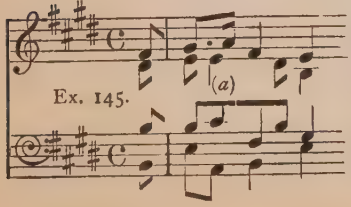


as an auxiliary note.

The retarded 7th on the tonic being fairly common, we give an example of one on the subdominant (*a*), also a 2 to 3 on the tonic in the key of C♯ minor (*b*), and a 4 to 5 in its second inversion (*c*).

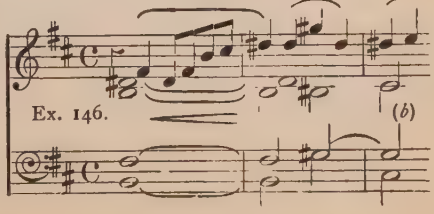
HANDEL—"Messiah."

Ex. 145.



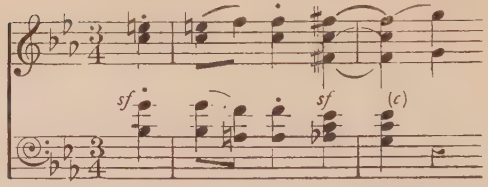
MENDELSSOHN—"Fingal's Cave."

Ex. 146.



BEETHOVEN—"Trio in E♭." Op. 1, No. 3.

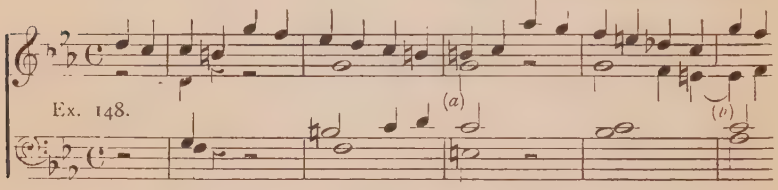
Ex. 147.



The three following examples respectively illustrate the first, second, and third inversions of the retarded 7th.

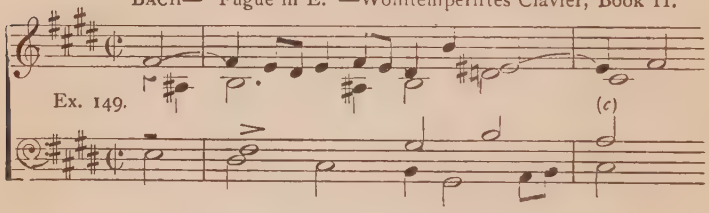
STAINER—"Daughter of Jairus."

Ex. 148.



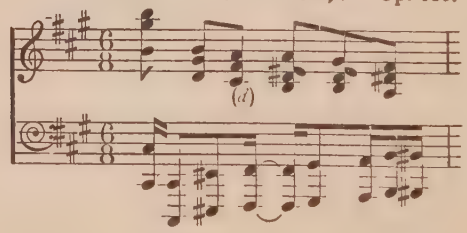
BACH—"Fugue in E."—Wohltemperirtes Clavier, Book II.

Ex. 149.



BEETHOVEN—"Sonata in B♭." Op. 106.

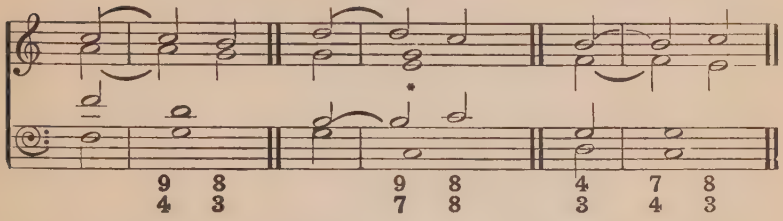
Ex. 150.



Observe the difference in the treatment of the first inversion of the retarded 7th. At *a* the root is in an inside part. At *b* the retardation is accompanied by an auxiliary note in the melody (§163). The second and third inversions of the retarded 7th, as shewn at *c* and *d*, should require no explanation.

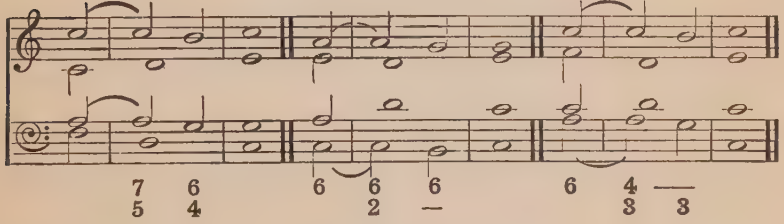
157.—Double and triple suspensions are formed by combining the suspensions and retardations already explained. The most usual double suspensions are

9 to 8 & 4 to 3 (implying a 5)	9 to 8 & 7 to 8 (implying a 3, or sometimes a 5)	and	7 to 8 & 4 to 3 (implying a 5) (*See Appendix.*)

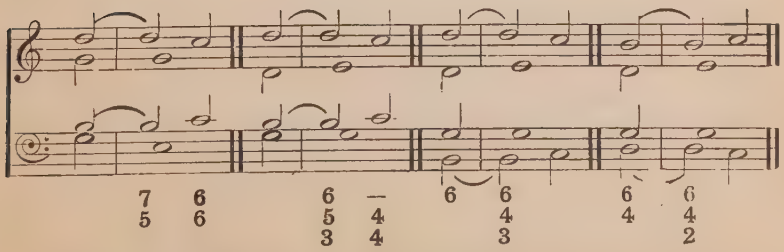


Of the above double suspensions, the first has three inversions, in both of which the root is omitted and the 5th from the root doubled. The $\frac{9}{7}\,\frac{8}{8}$ has four inversions, all of which omit the root and insert the 3rd and 5th from the root. The $\frac{7}{4}\,\frac{8}{3}$ is only rarely inverted, the 3rd from the root being in the bass and the root omitted.

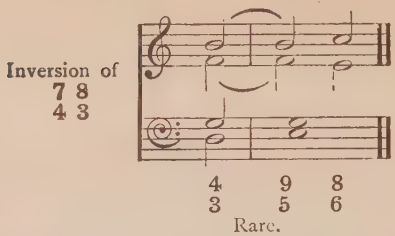
Inversions of $\frac{9}{4}\,\frac{8}{3}$



Inversions of $\frac{9}{7}\,\frac{8}{8}$



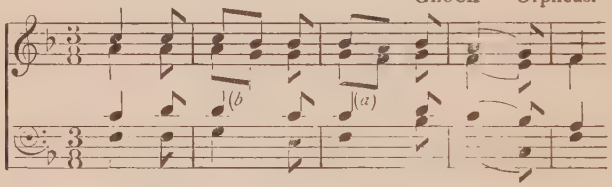
* The 5th from the root is used in the inversions of this suspension when in four parts, and in all its positions when in five parts.



To illustrate all these suspensions and their inversions would be impossible in the space at our disposal, especially when we remember that these combinations, particularly that of the $\frac{9}{4}\frac{8}{3}$, can be used on various degrees of the scale. As the four part examples in the text show the $\frac{9}{4}\frac{8}{3}$ on the dominant, our first illustration will give it on the tonic and supertonic (Ex. 151, *a*, *b*). Ex. 152, *c*, shows the 3rd from the root in the bass. The inversion containing the 4 to 3 in the bass is illustrated in Ex. 32, where, at the commencement of the third and fourth bars, we have, respectively, inversions of the $\frac{9}{4}\frac{8}{3}$ on the subdominant and on the mediant.

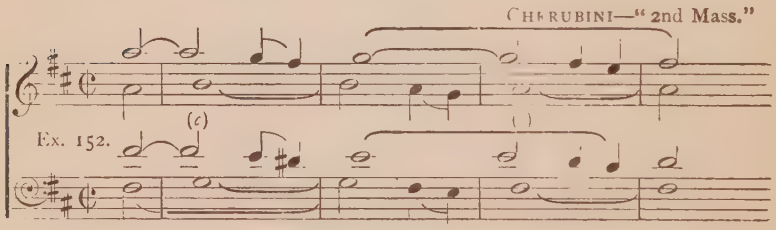
GLUCK—"Orpheus."

Ex. 151.



CHERUBINI—"2nd Mass."

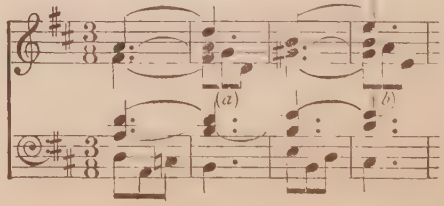
Ex. 152.



The following examples illustrate the inversions of the $\frac{9}{7}\frac{8}{8}$.

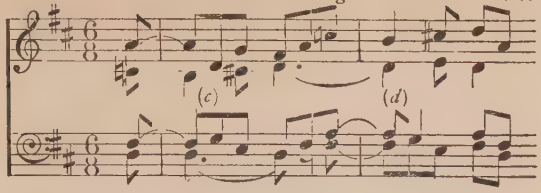
GUILMANT—"Cantilène Pastorale." Op. 15.

Ex. 153.



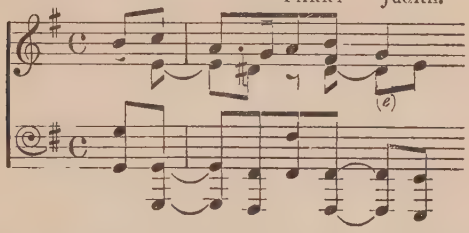
MENDELSSOHN—"Organ Sonata." No. 6.

Ex. 154.



PARRY—"Judith."

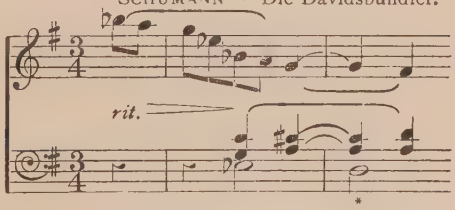
Ex. 155.



At *a* and *b*, Ex. 153, we have the first inversion of the $\frac{9}{7}\,\frac{8}{8}$ on the tonic in the keys of G and A. The second inversion (with the 9th ornamentally resolved) is shewn at *c*, Ex. 154; and at *d*, Ex. 154, we have the 7 to 8 in the bass, the 9 to 8 in the bass being shewn at *e*, Ex. 155. The following illustrations of the $\frac{7}{4}\,\frac{8}{3}$ should need no comment.

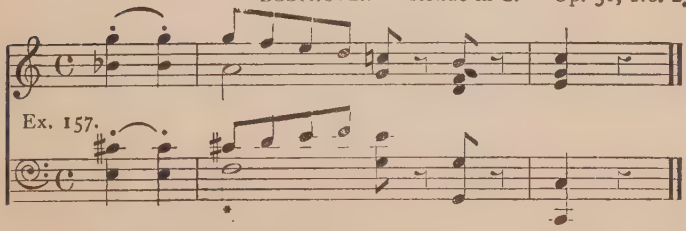
SCHUMANN—"Die Davidsbündler."

Ex. 156.



BEETHOVEN—"Rondo in C." Op. 51, No. 2.

Ex. 157.



158.—A triple suspension (which is generally found upon the tonic) is most frequently formed by combining 9 to 8, 7 to 8, and 4 to 3.* (*See Appendix.*)

* The student should now answer questions 36-45, and finish the remaining figured basses at the end of the chapter.

An example of a triple suspension ($\begin{smallmatrix}9&8\\7&\\4&3\end{smallmatrix}$ on the tonic with the 4 to 3 ornamentally resolved) is given in Ex. 158. This suspension is generally used—as here—cadentially. If inverted, it is usually found with the 3rd from the root in the bass, Ex. 159.

MACFARREN—"St. John the Baptist."

Ex. 158.

MENDELSSOHN—"Elijah."

Ex. 159.

159.—In harmonizing a melody, a suspension or retardation can generally be introduced

(*a*) When a melody note, occurring upon an unaccented beat, is repeated (or tied) upon an accented beat and then falls or rises one degree.

(*b*) When roots ascend a 4th or descend a 5th, the 9 to 8 or 7 to 8 may generally be introduced in one or other of the parts.

(*c*) When roots descend a 4th or ascend a 5th, the 4 to 3 may be introduced.

(*d*) When roots ascend a 2nd, the 9 to 8 or 4 to 3 may be introduced.

160.—The 9 to 8 and 4 to 3 may occur on any degrees of the major or minor scale which bear common chords (§§16, 17), and the inversions of the suspensions which produce chords of the 6th or chords of the $\frac{6}{4}$ (§67) may be employed upon those degrees of the scale upon which the first or second inversions of the common chord are permitted to be introduced (§§82, 83).

161.—The retarded 7th generally occurs upon the tonic and subdominant. If used upon the dominant it could not be regarded as a retardation, because the 7th would then be an essential note (§135). (*See Appendix*, Ex. 23.)

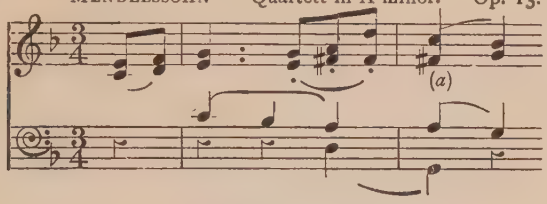
162.—Double suspensions can be used upon almost any degree of a major or minor scale which bears a common chord.

163.—Great care should be taken to distinguish between double and triple suspensions which must be prepared (§137), and combinations of

suspensions with passing and auxiliary notes, in which only the suspension need be prepared, or entire combinations of passing and auxiliary notes, of which none need be prepared.

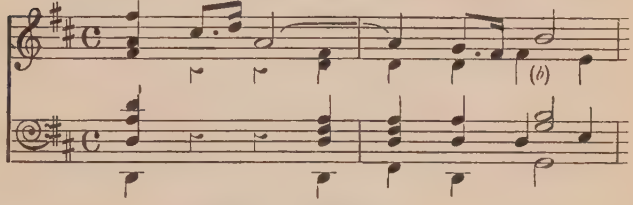
MENDELSSOHN—"Quartett in A minor." Op. 13.

Ex. 160.



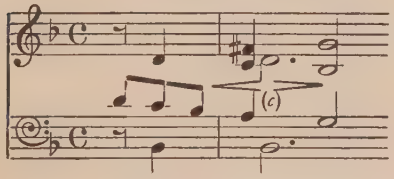
SMART—No. 6 of "Six Short and Easy Pieces." (Organ.)

Ex. 161.



BARNBY—"Rebekah."

Ex. 162.



At *a*, Ex. 160, we have a $\frac{9\,8}{7\,8}$ combined with a passing note in the melody. At *b*, Ex. 161, we have, in the tenor, the first inversion of the retarded 7th on the supertonic in the key of D, the 9th in the alto being an auxiliary note. At *c*, Ex. 162, we have an auxiliary note in the melody, combined with passing notes in the inside parts. As *a*, *b*, and *c* would be figured respectively $\frac{9\,8}{7\,8\,4\,3}$, $\frac{7\,6}{5\,6}$, and $\frac{9\,8}{\#7\,6\,5\,6}$ it is evident that these combinations are not distinguished from suspensions by their figuring, but by the fact that one or more of the dissonant unessential notes is unprepared.

QUESTIONS ON CHAPTER XIII.

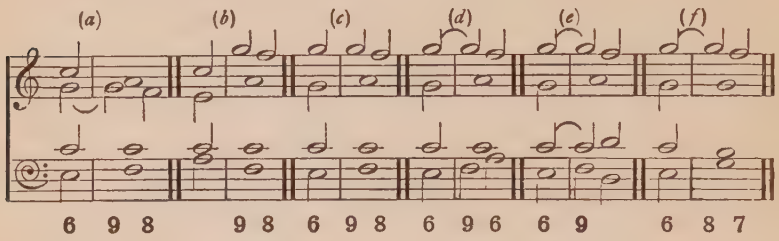
1.—What is a suspension?

2.—Distinguish between a suspension and a syncopated note.

3.—Distinguish between a suspension and an auxiliary or a passing note.

4.—Name three points of difference between suspensions and fundamental discords.

5.—Say which of the following are or are not suspensions. Give reasons for your answers.



6.—Upon what beats of a bar may (*a*) the preparation, (*b*) the percussion, and (*c*) the resolution of a suspension occur?

7.—Give three rules relating to the preparation of a suspension.

8.—How, and upon what, does a suspension resolve?

9.—In what part can the note of resolution be heard at the same time as the suspension?

10.—How many suspensions are there?

11.—What do you understand by a suspended 9th or a suspended 4th?

12.—What compound interval is not regarded as simple in thorough bass figuring?

13.—What is the least possible distance between a 9th and its root?

14.—What interval cannot prepare the 9th, and for what reason?

15.—Of how many inversions is the 9 to 8 capable?

16.—Give the figuring of the root position and inversions of the suspended 9th.

17.—What intervals are implied, and what doubled, in the root position and in the inversions of the 9 to 8?

18.—What interval from the root forms the bass of the third inversion of the suspended 9th?

19.—What is omitted in the inversions of the 9 to 8, and what other chord with which you are at present acquainted resembles it in this respect?

20.—Upon what chords do the 9 to 8 and its inversions resolve?

21.—What is, and what cannot be denoted by a figured bass?

22.—When does 7 imply a 5 and a 3, and when a 3 only?

23.—What is the difference between the chords denoted, and intervals implied, by the figures $\frac{6}{5}$ when placed under the leading note and the dominant respectively?

24.—Is there any difference between the 3rd implied by 7 placed under the dominant and that implied by 7 placed under the mediant?

25.—Of how many inversions is the 4 to 3 capable?

26.—Give the figuring of the root position and inversions of the suspended 4th.

27.—What intervals are implied, and what doubled, in the root position and in the inversions of the 4 to 3?

28.—What note forms the bass of the last inversion of the suspended 4th?

29.—What interval is omitted in every position of the 4 to 3 except one?

30.—Give a reason for this omission.

31.—Upon what chords do the suspended 4th and its inversions resolve?

32.—Can suspensions occur in any part, or can they be doubled?

33.—In what respect do suspensions resemble fundamental discords?

34.—Write out several ornamental resolutions of the suspended 4th.

35.—Must a suspension always resolve (*a*) upon the same root, or (*b*) upon the same bass note?

36.—Distinguish between a retardation and a suspension.

37.—What are the only possible retardations, and which of these is the most common?

38.—In what respect does the 7 to 8 resemble the 9 to 8?

39.—Of how many inversions is the retarded 7th capable?

40.—Give the figuring, and state what intervals are implied, and what doubled, in the root position and in the inversions of the 7 to 8?

41.—What note is sometimes omitted in the inversions of the retarded 7th?

42.—What is the least possible distance between a retarded 7th and its root?

43.—What interval may prepare a dominant 7th and not a 7 to 8?

44.—What chords are produced by the resolution of the retarded 7th?

45.—What are double and triple suspensions, and how are they formed?

46.—What progressions of melody, or of radical basses, permit the introduction of suspensions?

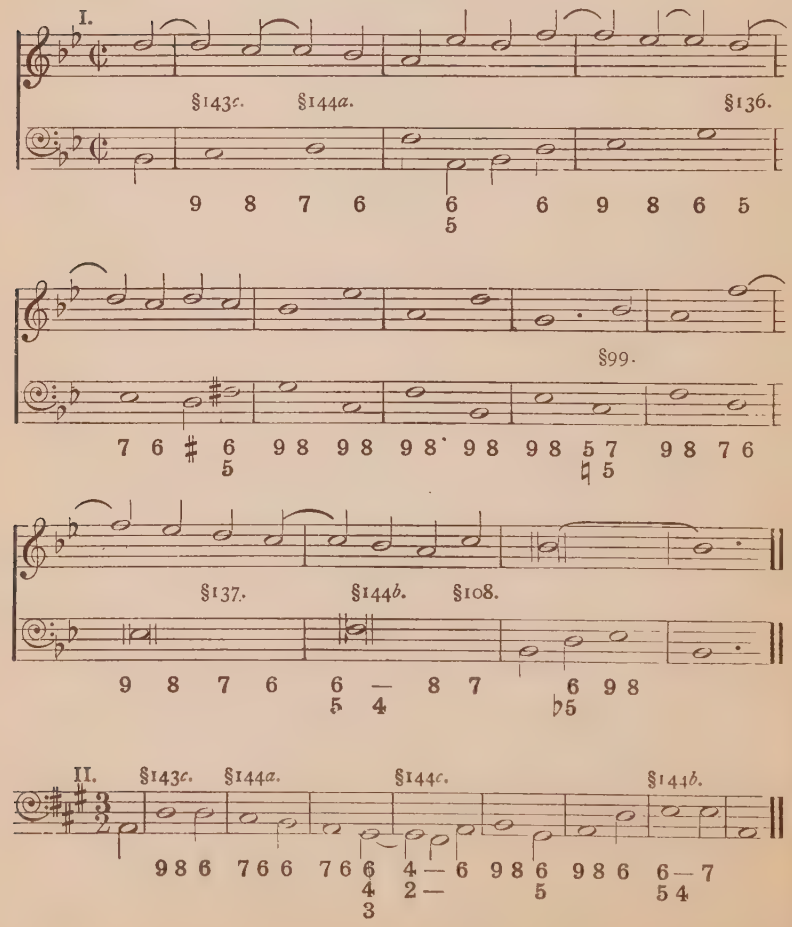
47.—Upon what degrees of a scale may (*a*) the 7 to 8, (*b*) double suspensions, and (*c*) triple suspensions occur?

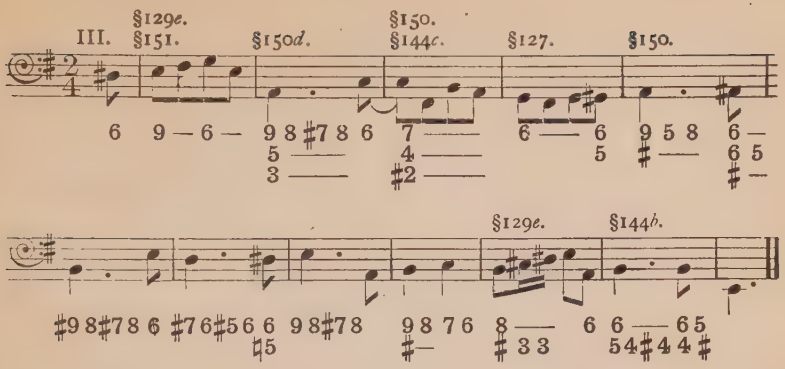
48.—What interval sometimes replaces the 7 to 8 in a triple suspension?

49.—Can a suspended 9th be placed over the leading note of any scale?

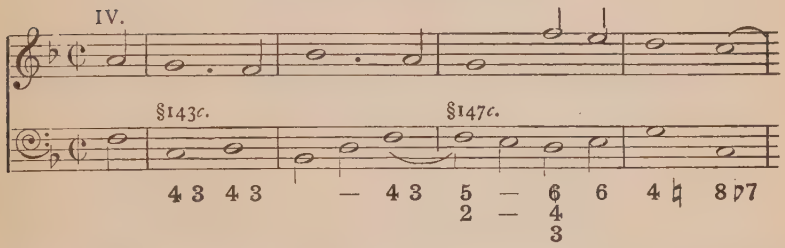
50.—Can a discord prepare a suspension?

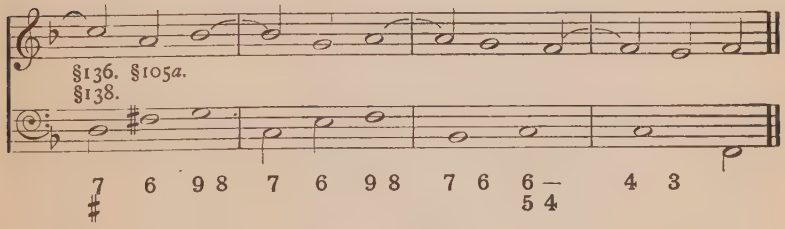
Exercises on Chapter XIII.

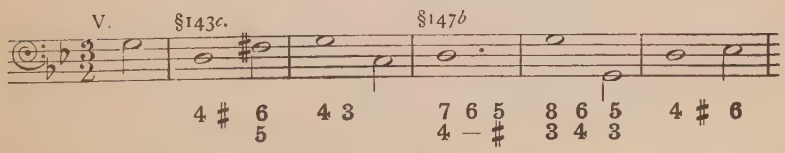


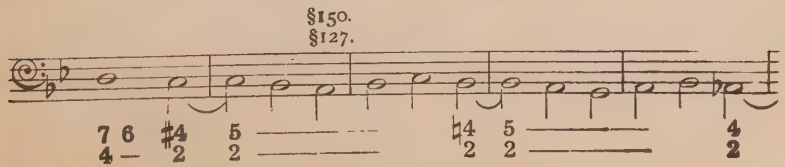


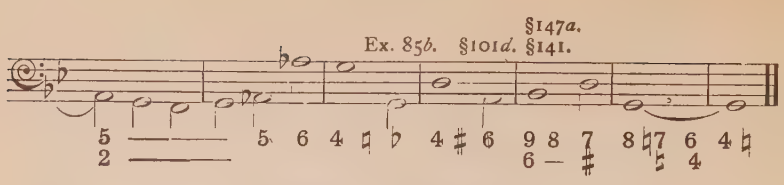
THE SUSPENSION 4 TO 3.





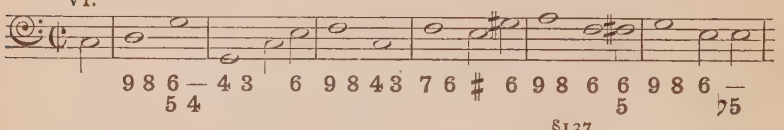


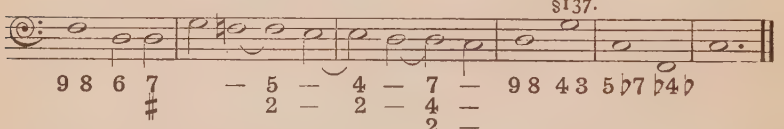




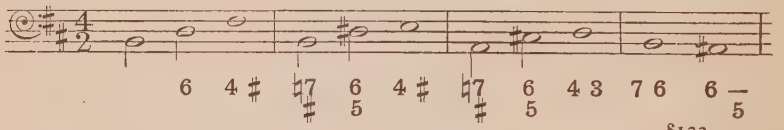
Suspended 4ths and 9ths.

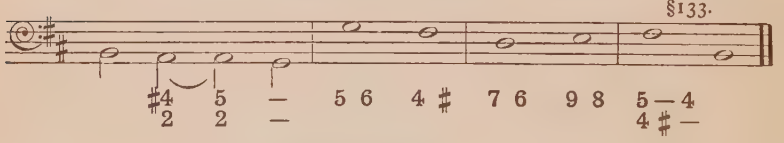
VI.





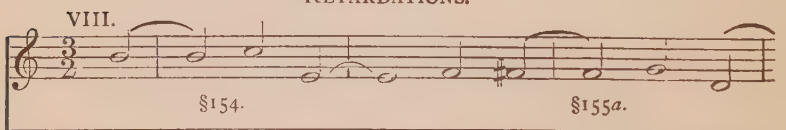
VII.

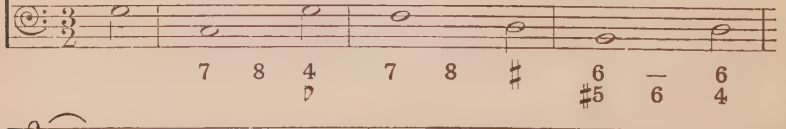


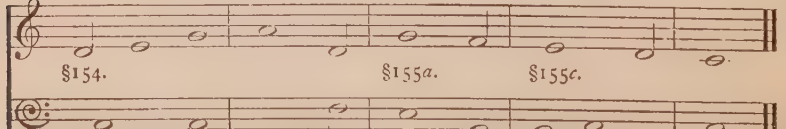


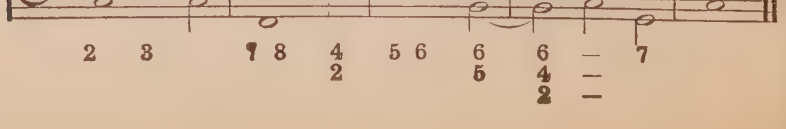
Retardations.

VIII.

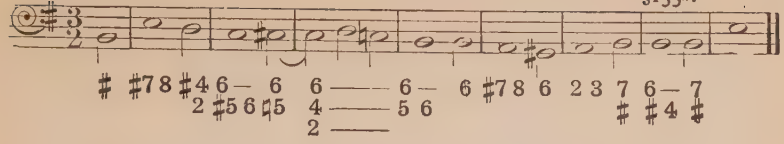






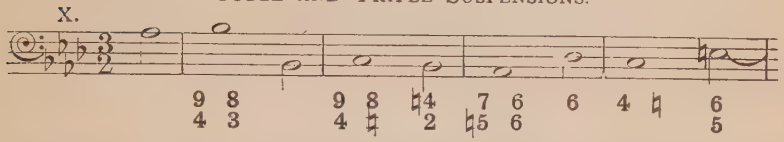


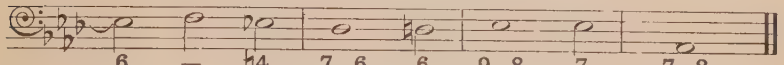
IX. §155*b*.



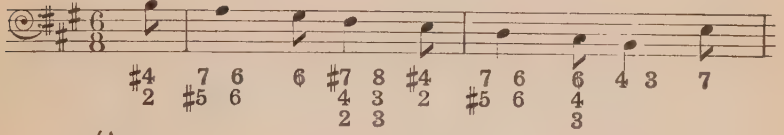
Double and Triple Suspensions.

X.

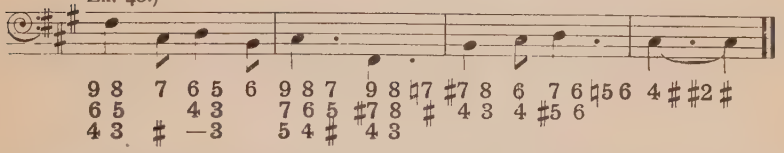




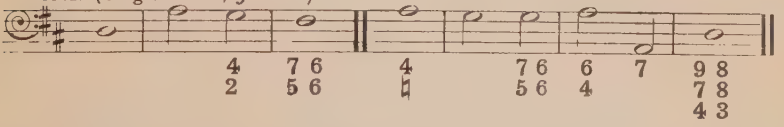
XI.



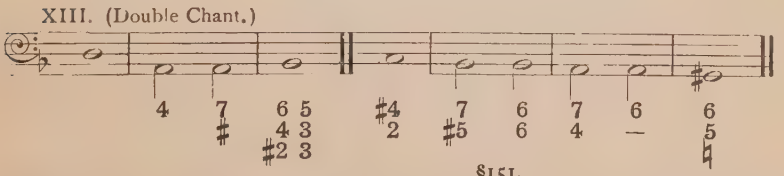
(App. Ex. 48.)



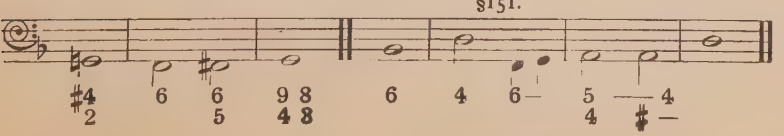
XII. (Single Chant, 5 Parts.)



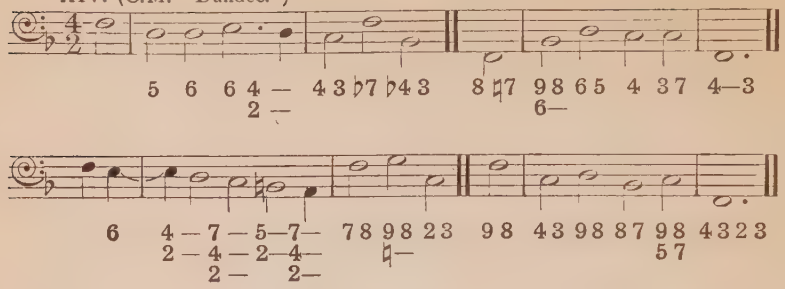
XIII. (Double Chant.)



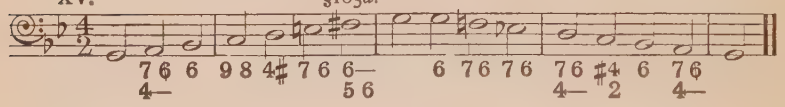
§151.



XIV. (C.M. "Dundee.")

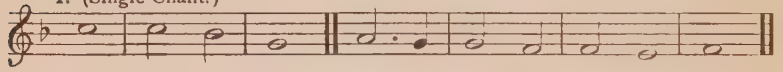


XV. §105*a*.

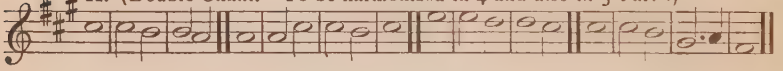


Melodies.

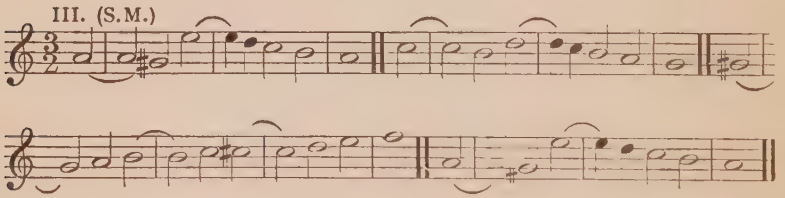
I. (Single Chant.)



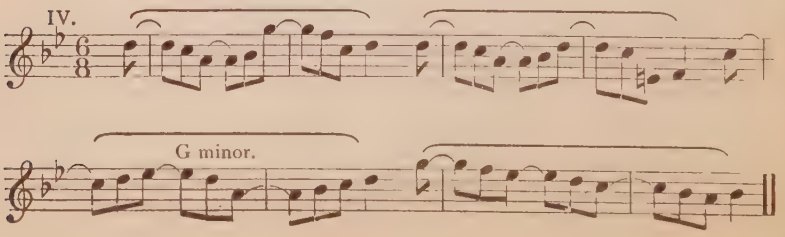
II. (Double Chant. To be harmonized in 4 and also in 5 Parts.)



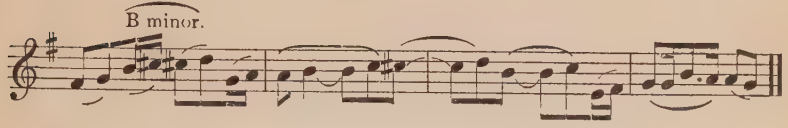
III. (S.M.)

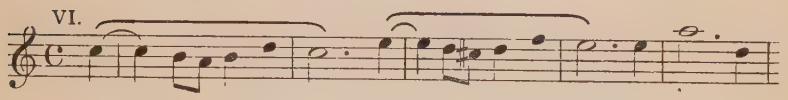


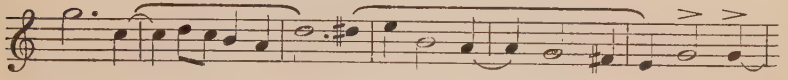
IV.

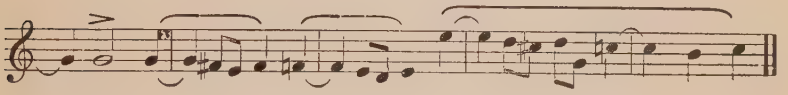


V. (In 3 Parts.)
D.
5 6
on A.


B minor.


VI.

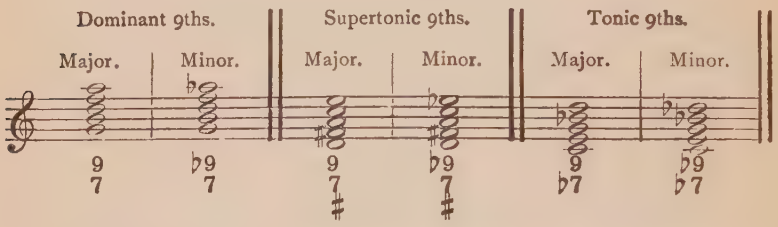




CHAPTER XIV.

Chords of the Ninth.

164.—If to the fundamental chord of the 7th on the dominant (Chap. X.), or to that on the supertonic or tonic (Chap. XI.), we add a major or a minor 3rd above the 7th, we obtain a chord known as that of the **major** or **minor** 9th, and formerly called the chord of the **added** 9th, *e.g.*, in C major :—



All the above chords can be used in a major key, the minor chords being then regarded as chromatic in the same manner as the triads of a minor key are regarded when used in the key of the tonic major (§48). But the chords of the major dominant and supertonic 9ths cannot be used in a minor key,* because the harmonic minor scale contains no major 6th or major 3rd. Therefore, in minor keys, the latter intervals can only occur as the 5th of a supertonic chord or the 3rd of a tonic; *e.g.*, C minor contains neither A nor E, unless A be the chromatic 5th of the supertonic chord, or E, the chromatic 3rd of the tonic chord.

165.—Chords of the 9th, having five notes, cannot be used in four-part harmony without one of these notes being omitted. This is generally the 5th in the root position, and the root in the inversions. The latter omission is necessitated because the 9th being about to resolve upon its root, the root should not be heard at the same time as the 9th unless the 9th be placed in the bass. This is in accordance with the rule given in §141. (*See Appendix.*)

166.—The *3rd* and *7th* should *rarely* be omitted in chords of the 9th; in fact, the presence of the latter interval, either in the chord or in its chord of resolution, enables us to distinguish between a *fundamental 9th* (*a*, *b*), a *suspended 9th* (*c*), or a 9th treated as an *auxiliary note* (*d*) (§137). (*See Appendix.*)

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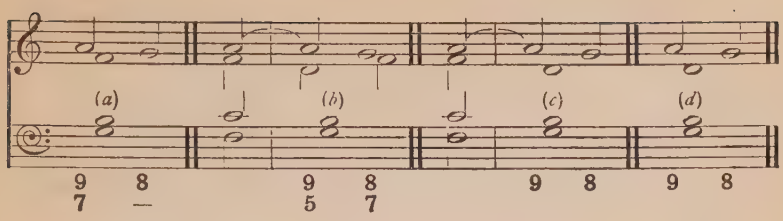
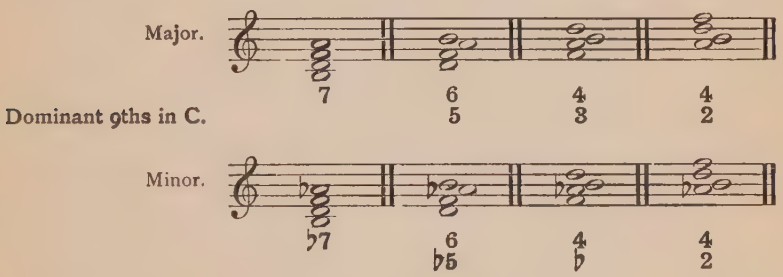
* Unless as stated in §174.



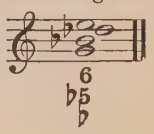
Here the fundamental 9th, as at *a*, implies a 7* and a 3, and need not be prepared; the suspended 9th implies a 5 and a 3, but not a 7, and requires preparation; while the auxiliary note has a 5 and a 3, but needs no preparation whatever.

167.—The student will observe that, in accordance with §22, fundamental, suspended, passing, or auxiliary 9ths are the only compound intervals which, for the purposes of figuring, are not regarded as simple. This is because (as stated in §143*b*) every 9th must be at least nine notes distant from its root.

168.—Having five notes, *chords of the 9th are capable of four inversions* (§53). These, with their intervals and figuring, are as follows:—



Supertonic and tonic 9ths are figured in the same manner as the above dominant 9ths, accidentals being inserted before the figures denoting the chromatic notes, which notes must be duly specified in the figuring, *e.g.*



The student should write out for himself the inversions of the supertonic and tonic 9ths given in §164.

Our first illustration of chords of the 9th shows the dominant 9th in D minor in all its inversions.

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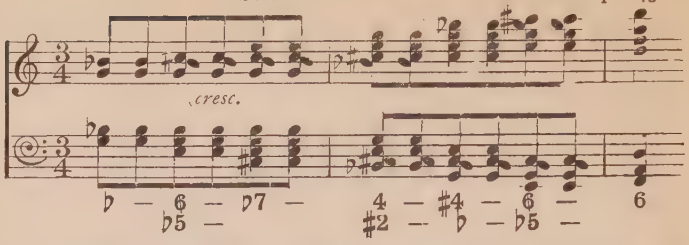
* Either in the discord or its chord of resolution.

SCHUBERT—"Sonata in A minor." Op. 143.

Ex. 163.

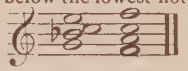


As the student is now well aware, the doublings do not affect the figuring or the nature of the chord (§§21, 22).

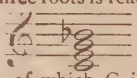
169.—The intervals implied in the figuring of chords of the 9th are identical with those implied in the figuring of chords of the 7th (§95). Like the suspended 9th, a fundamental 9th can be distinguished from a similarly figured 7th, by the degree of the scale on which it occurs and the nature of the intervals implied by the given figuring; *e.g.*, $\frac{6}{5}$ on the leading note would signify the first inversion of a dominant 7th, and would imply a minor 3rd, a diminished 5th, and a minor 6th; but a $\frac{6}{5}$ on the supertonic would signify the second inversion of a dominant 9th, and would imply a minor 3rd, a diminished or perfect 5th (consequent upon the 9th being major or minor), and a major 6th. The student is advised to work out these points for himself.

170.—Having already noticed that figuring affords no clue whatever to the root of a chord (§146), and that, in common with some other chords (§§102, 145*a*), the fundamental 9th loses its root in its inversions (§165), the following rule for finding the root of a fundamental discord (§89) will be found useful, viz. :—

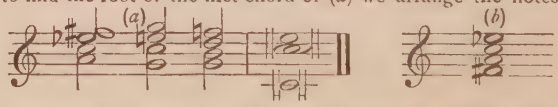
Arrange the notes of the chord so that they stand in 3rds one above another, supplying any notes which in chords of the 11th and 13th may be omitted (§§197, 219). Then, if the lowest note be the dominant, supertonic, or tonic of the key of the passage in which the chord is written, and bear above it a *major* 3rd, *perfect* 5th, and *minor* 7th, the lowest note is the root. But if the lowest note be not dominant, supertonic or tonic, add 3rds below the lowest note until one of these three roots is reached. Thus, to find the root of the first chord in—



we arrange the notes in 3rds :—



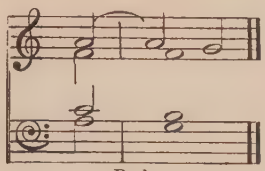
Then, as the resolution shows the chord to be in the key of F, of which C is the dominant, and as the chord contains a major 3rd, perfect 5th and minor 7th of that dominant, the lowest note, C, is the root; and the interval C to B♭ being a minor 7th, the chord is the dominant 7th in the key of F, in its second inversion. Similarly, to find the root of the first chord of (*a*) we arrange the notes in 3rds (*b*),



and then, as the lowest note is neither dominant, supertonic, nor tonic, in the key of C (which is evidently the key of the passage), we add another 3rd below our lowest note, F♯. This note would, in accordance with the key signature, be D, which is

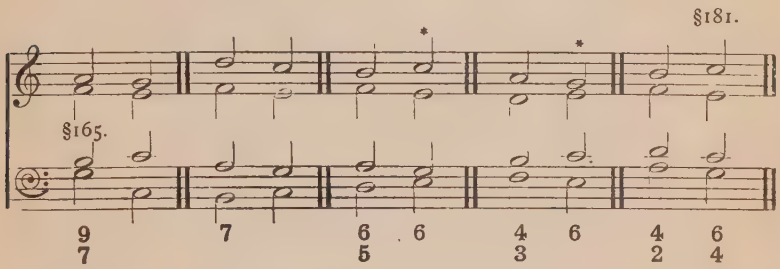
the supertonic in the key of C; and as the chord then contains a major 3rd, perfect 5th and minor 7th, and the interval from D to E♭ is a minor 9th, it follows that the chord is that of the supertonic minor 9th in its second inversion.

171.—Like the suspended 9th (§143*d*), *the fundamental 9th in its root position cannot be prepared by an 8ve* between the bass and the part containing the 9th, on account of the consecutive 8ves which would be produced by the resolution of the 9th.



Bad.

172.—*Dominant 9ths resolve on tonic or supertonic harmony*, generally the former, *or they may resolve upon their own roots*, a progression more common in chords of the 9th, 11th, and 13th, than in chords of the 7th. When followed by tonic harmony, the 9th *descends* one degree to the 5th of the tonic, the other notes of the chord proceeding as in the case of dominant 7ths (§96), *e.g.*,



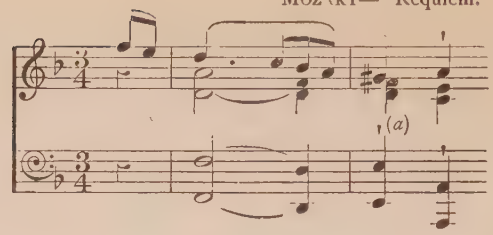
The student can easily transpose these into a minor key, remembering that the minor 9th may be followed by a major or a minor tonic chord, because the minor 9th can be used in both major and minor keys (§164).

As the resolution of the 9th upon the tonic chord has been shewn in a major key, we will now give two illustrations of minor 9ths. The first shews (at *a*) the root position and resolution of the dominant 9th, in A minor, with the 5th omitted, while the second example exhibits all the inversions of a dominant *minor* 9th in a *major* key. The student will observe that the melody is doubled in a 8ve below, but the harmony, exclusive of this doubling, is in four and not in five parts. (*See Appendix*)

* Note the doubled major 3rd in the chord of resolution.

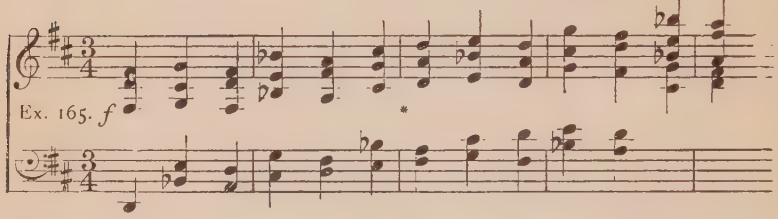
MOZART—"Requiem."

Ex. 164.

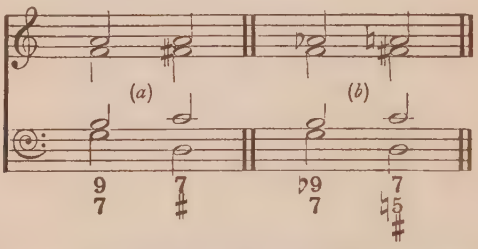


SCHUMANN—"Novelletten." No. 4.

Ex. 165. *f*



173.—When the dominant 9th resolves upon the harmony of the supertonic, the 9th, if major, *remains stationary* (*a*); or, if minor, *rises a chromatic semitone* (*b*); in both cases forming the 5th of the supertonic chord. The inversions of these and following examples, the student should carefully work out for himself.



These points are illustrated in the following extracts, wherein, at *a*, C, the dominant 9th in E♭, is sustained to become the 5th of the supertonic 9th. The B♭ is a dominant pedal (§§284, 286) and does not affect the harmony. The F♯ in the bass of the third bar, being the minor 9th of F, should be written as G♭. This is the first example we have had of false notation (§175), ascending chromatic notes being generally written with signs of sharpening so as to save an accidental. At *b* the dominant 9th is resolved upon the supertonic 9th, the 9th, F, rising a chromatic semitone. Observe that although the resolutions of the dominant 9ths are upon supertonic 9ths, and not upon 7ths as given above, the progression of the 9th remains the same.

* Note the ascent of the 7th as compared with its descent in the other inversions.

GRIEG—"Sonata in C minor" (Pianoforte and Violin). Op. 45.

Ex. 166.

(*a*)

BEETHOVEN—"Sonata in A" (Pianoforte and Violin). Op. 12, No. 2.

Ex. 167.

(*b*)

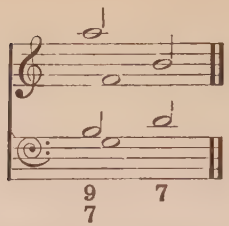
174.—When the dominant 9th resolves upon its own root, the 9th generally *descends* a 2nd to the 8ve of the root or to the root itself (*a*), or *rises* a 2nd to the 3rd of the root (*b*).

(*a*) (*a*) (*b*) (*b*)

9 8	4 —	7 —	6 —
7 —	2 —	2 3	3 4
			2 —

The resolution of the 9th before the 7th materially softens the harshness of the last inversion of the dominant 9th and avoids its unpleasant resolution upon the $\frac{6}{4}$ (§172). Observe that when the 9th ascends to the 3rd, the latter interval is omitted in the accompanying parts, the 5th or root taking its place; also that, owing to the 9th not resolving upon the 8ve of the root, the root is permitted in an inside part (§§141, 165). If the last example be transposed into the tonic minor key, the augmented 2nd resulting from the ascent of the 9th is considered unobjectionable; but, owing to the harshness of the sounding of the minor 9th with the root in an inside part, the ascending 9th is better when the 9th is a major interval.* The 9th may also fall a 7th instead of rising a 2nd, as shewn on the next page, but this resolution and the second of those at *b*, above, are more suited to instrumental than to vocal music.

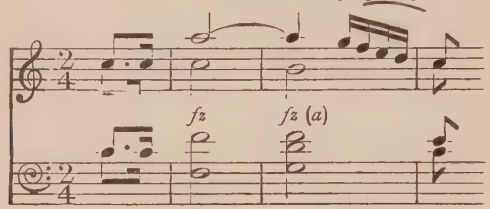
* In this case only—that of an ascending 9th—is the *major* 9th allowed in a minor key, unless we regard the minor chord on the dominant alluded to in §76 as the three upper notes of the tonic major 9th.



The following examples will illustrate the points raised in the preceding paragraph.

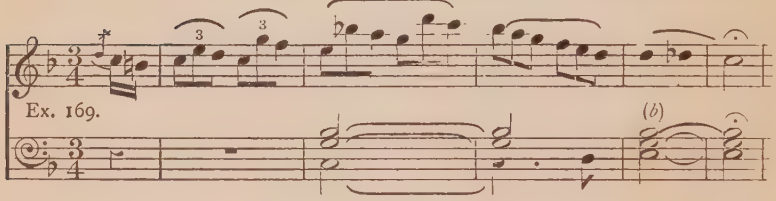
SCHUBERT—"Symphony in C."

Ex. 168.



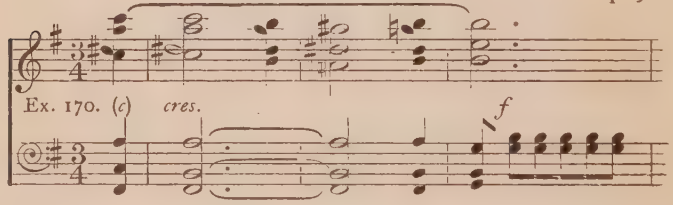
SCHUBERT—"Adagio and Rondo" (Pianoforte Quartett).

Ex. 169.



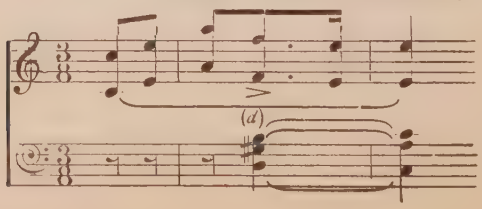
BEETHOVEN—"Sonata in E minor." Op. 90.

Ex. 170.



BENNETT—"Woman of Samaria."

Ex. 171.



MENDELSSOHN—"St. Paul."

Ex. 172.

(*e*)

SULLIVAN—"Prodigal Son."

Ex. 173.

(*f*)

BEETHOVEN—"Sonata in E minor." Op. 90.

Ex. 174. *dim.*

(*g*)

BEETHOVEN—"Trio in C minor." Op. 1, No. 3.

Ex. 175.

(*h*)

MENDELSSOHN—"Lieder ohne Worte." No. 10.

Ex. 176.

(*i*)

BEETHOVEN—"7th Symphony."

Ex. 177.

(*j*)

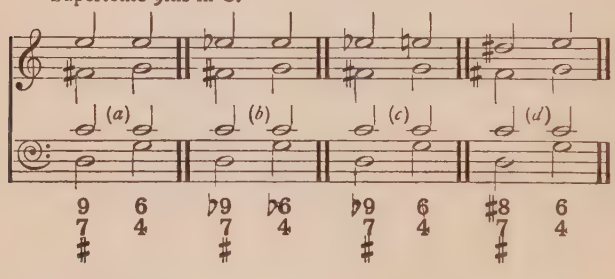
(*k*)

At *a*, the dominant 9th in C major, in its root position, resolves upon its own root, the chord of resolution in Exs. 168 to 177 being some form or other of the dominant 7th. At *b* the first inversion of the dominant major 9th in F resolves upon the minor 9th, and then upon the dominant 7th. At *c* we have the second inversion of the 9th resolved upon its own root, and doubled in the 8ve above and below. Observe that the lower doubling resolves before the upper, thus

producing an inverted 9th with the root present. Exs. 171 & 172 show the remaining inversions of the dominant 9th resolved as before. At *f* the major 9th in its second inversion (with the root in an inside part) ascends, as does the minor 9th, in its root position, at *g*. At *h* and *i* we have respectively the major and minor 9th falling a 7th. The B in the penultimate chord of Ex. 176 is an anticipation. Ex. 177 shows the ascending major 9th in a minor key, in its root position at *j*, and at *k* with the 9th in the bass. These examples should be carefully studied by the student, who should endeavour to discover similar illustrations in any classical works with which he may be acquainted.

175.—*The supertonic 9th generally resolves on tonic or dominant harmony.** If upon the former, the 9th *remains stationary* (*a*, *b*); or, if a *minor* 9th resolving on the tonic *major*, the 9th *rises* a chromatic semitone (*c*), in every case becoming the 3rd of the tonic chord. The ascending chromatic supertonic minor 9th is frequently written as an *augmented* 8*ve* (*d*) in order to save an accidental. This substitution of augmented for minor intervals is termed *convenient* or *false notation*, and is frequently adopted when a note ascends a chromatic semitone. (*Vide* §183 & Ex. 166.)

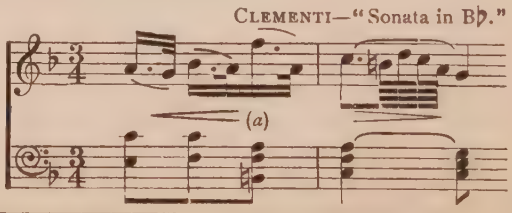
Supertonic 9ths in C.



The inversions of these harmonies should be carefully worked out and correctly figured, care being taken to omit the root and insert the 5th in the inversions.

We now show to what extent these rules are deduced from the practice of good composers.

Ex. 178.



* *Vide* §178.

BEETHOVEN—"Bagatelle in D." Op. 33, No. 6.

Ex. 179. *cres.* *ff* *p* (*b*)

FIELD—"Nocturne in A." No. 8.

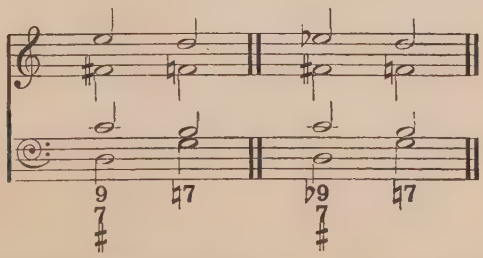
Ex. 180. (*c*)

CHOPIN—"Ballade in A♭." Op. 47.

Ex. 181. (*d*)

These examples require but little explanation. At *a* the supertonic *major* 9th, A (key F, root G), in the lower staff, resolves on the tonic chord, the A in the melody being an anticipation (§133); and at *b* the supertonic *minor* 9th, A (key F♯ minor, root G♯), also resolves on the tonic chord, the 9ths remaining stationary in both resolutions. At *c* the first inversion of the supertonic minor 9th (key A, root B) resolves upon the tonic chord by the 9th rising a chromatic semitone. The same progression obtains at *d*, but here the supertonic 9th (C) is written as B♮. A similar example is to be found in Ex. 166.

176.—When the supertonic 9th resolves upon the dominant harmony, the 9th *descends* a 2nd to the 5th of the dominant chord.



The following illustration shows the first inversion of a supertonic 9th in a minor key resolving on the dominant 9th (the 9th descending a 2nd) and inducing another example of allowed false relation. (*See* ***Appendix***, **Ex. 13.**)

MENDELSSOHN—"Pianoforte Fugue in E minor."

Ex. 182.

The last inversion of a supertonic 9th resolved as above, only upon the chord of the dominant 11th, will be found in the last bars of Ex. 186.

We also append two other examples of somewhat exceptional interest. In the first the supertonic minor 9th (C♮) is carelessly written as an augmented 8ve (B♯), thus necessitating an additional accidental (B♮). In the second example the supertonic 9th, being resolved upon a chord of the dominant 13th (§236*d*) remains stationary, although eventually falling, after its conversion into a dominant 13th. This example should be again referred to after Chapter XVI. has been studied. (*See Appendix.*)

RUBINSTEIN—"Scherzo in A minor."

Ex. 183.

GOETZ—"137th Psalm."

Ex. 184.

177.—*Tonic 9ths generally resolve upon supertonic or dominant harmony* (*vide* §178); in the former case the 9th *descends* a 2nd to the 7th of the supertonic (*a*, *b*); and in the latter the 9th, if major, *remains stationary* (*c*), or, if minor, *rises* a chromatic semitone (*d*), in both the latter cases forming the 5th of the dominant chord. Like the supertonic 9th (§175*d*), the tonic 9th is sometimes written as an augmented 8ve (*e*).

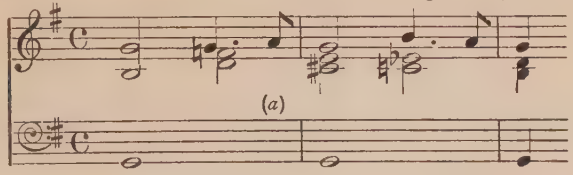
(*a*) (*b*) (*c*) very rarely used. (*d*) (*e*)

† See note in *Appendix* on §41, *a*, *e*.

The following examples show the practical application of the rules just given.

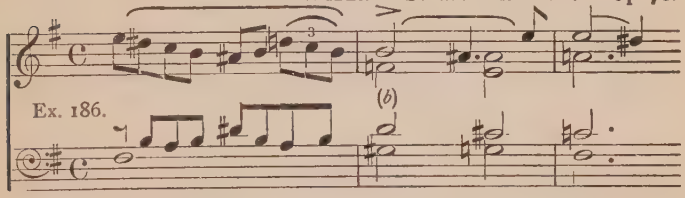
STAINER—"Daughter of Jairus."

Ex. 185.



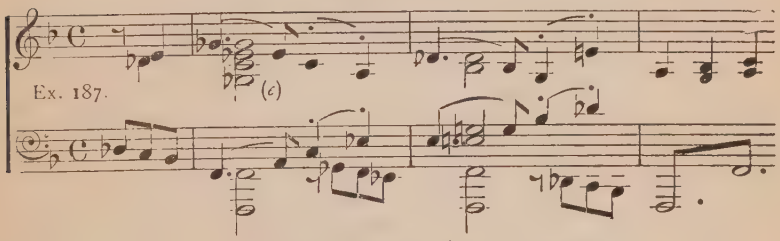
WEBER—"Sonata in E minor." Op. 70.

Ex. 186.



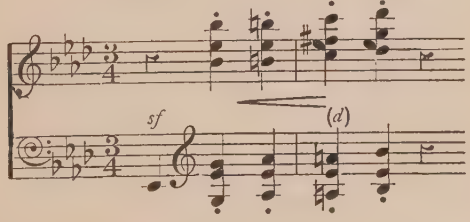
SCHUMANN—"Pianoforte Trio in F." Op. 80.

Ex. 187.



CHOPIN—"Waltz in A♭." Op. 34, No. 1.

Ex. 188.



Tonic 9ths, in common with all other tonic discords, are much rarer than those on the supertonic or dominant. At *a* the tonic (*major*) 9th in G major resolves on the supertonic harmony by descending a whole tone. At *b* the tonic (*minor*) 9th in E minor resolves upon the supertonic 9th, this time the 9th descending a diatonic semitone. At *c* the harmony of the tonic (*minor*) 9th in F, of which the second bar of Ex. 187 consists, resolves in the next bar upon the harmony of the dominant minor 9th, the tonic 9th (G♭) rising a chromatic semitone to G♮, the

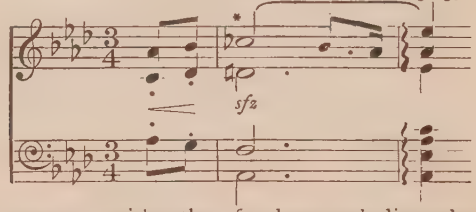
5th of the dominant chord. This example is an extremely complicated one, and will repay careful study. The bass note, F, is a tonic pedal (§§283-287) and is foreign to the dominant harmony of the third bar. Ex. 188*d* gives us a tonic (*minor*) 9th in A♭, the minor 9th (B♭♭) being written as A♮, and the minor 7th (G♭) as F♯. Thus there are two instances of false notation in the same chord. The student will observe that notwithstanding the complexity of the harmonies in Exs. 187 & 188, the progressions of the various notes of the chord of the tonic 9th are identical with the simpler examples given at the foot of page 152. (*See Appendix.*)

178.—The 9th in the supertonic and tonic 9ths may resolve upon its own root before the 7th; but these resolutions are not so common in the case of tonic and supertonic 9ths as in that of dominant 9ths (§174).

We give an example of a supertonic minor 9th, in the key of A♭, resolving upon its own root.

KULLAK—"Fleurs Animées." Op. 57.

Ex. 189.

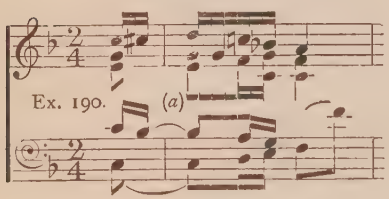


179.—In common with other fundamental discords, chords of the 9th may be (*a*) *resolved ornamentally* (105*a*), or (*b*) may have their dissonant intervals (7ths and 9ths) *transferred* from one part to another (§§105, 118).

The following examples will illustrate some of the most common ornamental resolutions of chords of the 9th.

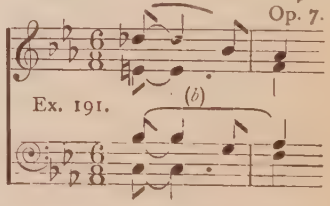
BEETHOVEN—"Mass in D."

Ex. 190.



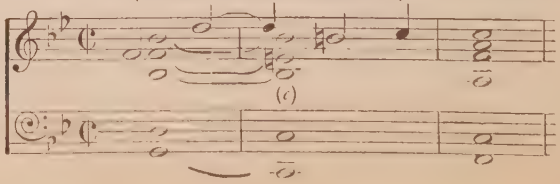
BEETHOVEN—"Sonata in E♭." Op. 7.

Ex. 191.



GADE—"Sonata in B♭" (Pianoforte and Violin). Op. 59.

Ex. 192.

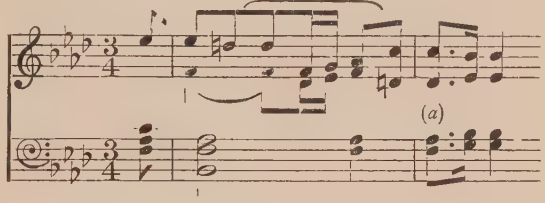


At *a* the 9th leaps to another harmony note, and at *c* to an auxiliary note, while at *b* it resolves by skip to another harmony note, but not returning to the note of resolution as at *a*. An example of transference of the dominant 9th in G minor from the tenor to the treble, and of the 7th from the treble to the tenor, is to be found in Ex. 105. Another example of transference of the 9th from the bass to the alto, and the 7th from the alto to the bass, will be seen in Ex. 194.

180.—In the second inversion of a 9th, the 7th, as in the second inversion of the dominant 7th (§101), may frequently *ascend* (*a*); or when in the bass (in the third inversion of a 9th), the 7th, as in the third inversion of a dominant 7th, may *ascend a 2nd* or *descend a 4th* (*b*). (*See Appendix, p.* 284.)*

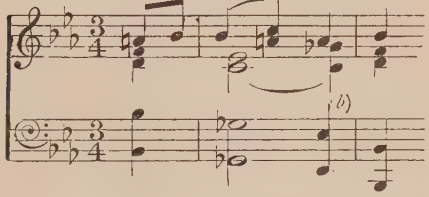
Ex. 193.

STAINER—"Daughter of Jairus."



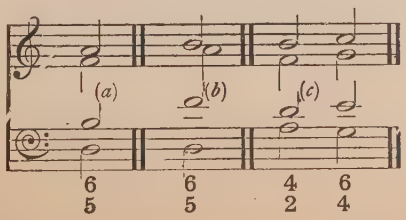
Ex. 194.

SULLIVAN—"Prodigal Son."



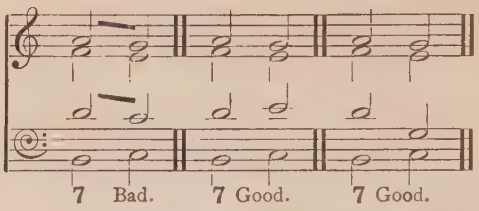
An example of an ascending 7th in the second inversion of a 9th has already been given in Ex. 165 (*q.v.*).

181.—The major 9th is generally better when placed *above* (*a*) rather than below the 3rd (*b*). The position of the 9th below the 3rd, and the resolution upon the $\frac{6}{4}$ already noticed (§174), together account for the harshness and awkwardness of the last inversion of the major 9th (*c*). The ascent of the 7th at *c* is much better than its descent as shewn in §172, because avoiding consecutive 4ths between the tenor and the bass, which are more objectionable than consecutive 4ths between any of the upper parts.



* In the second inversion of a 9th, the 7th, when in an inside part, may occasionally descend a 4th to avoid the doubled 3rd in the chord of resolution, as in the last two chords

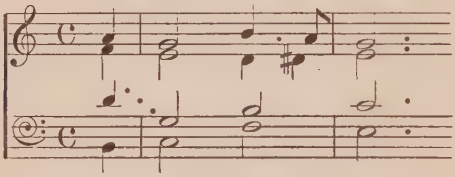
182.—When, in a dominant major 9th resolving upon the tonic chord, the 5th is *below* the 9th, the former interval must *rise a 2nd or a 4th or fall a 5th* in order to avoid consecutives.



An example of a 5th rising a 2nd (in this case in a supertonic 9th resolving on the dominant) may be seen in the *Appendix* (Ex. 61). We give an illustration of the 5th in a dominant 9th falling a 5th.

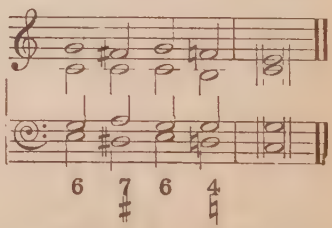
SCHUBERT—"Grand Duo." Op. 140.

Ex. 195.



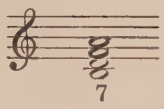
Although we have not thought it necessary to give rules for the avoidance of consecutives in the resolution of supertonic and tonic 9ths with the 5th below the 9th, the student should carefully guard against error when resolving these discords. The 5ths, produced by the descent one degree of both 5th and 9th in a chord of the *minor* 9th, are not considered objectionable unless in the outside parts, because one of the 5ths is a diminished 5th (§32*d*).

183.—We have already stated that a minor 9th resolving by the ascent of a chromatic semitone is frequently written as an augmented 8ve (§§175*d*, 177*e*). This false notation may easily beguile the student into assigning an incorrect root to the chord unless he carefully ascertain the key of the passage; *e.g.*, in the following example B cannot be the root of the second chord, because the passage is clearly in the key of C, in which key B is neither dominant, supertonic, nor tonic (§89). If we change the D♯ into E♭ we see that the root is D, *i.e.* the supertonic of C major, and the chord is a minor 9th on the supertonic, the 9th being written as an augmented 8ve of the root. The exercises following this chapter contain many examples of false notation inserted with a view to test the student's knowledge and

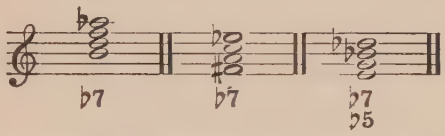


powers of observation. The reason of the minor 9ths being written as augmented 8ves is to render the music easier to read by saving an accidental, an E♮ being required in the third chord of the foregoing example if E♭ be used in the second.

184.—From the fact of its bass note being the leading note of the key, the first inversion of the dominant *major* 9th is known as the **chord of the leading 7th.**

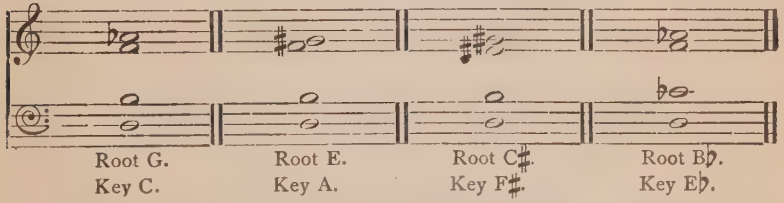


185.—The first inversions of the minor 9ths on the dominant, supertonic, and tonic are often termed **chords of the diminished 7th,** because that interval is found between their lowest and highest notes, *e.g.*,



It will be observed that in the above chords the notes are distant a minor 3rd from one another. The diminished 7th was, by some old writers, occasionally called *the chord of the flat 7th.*

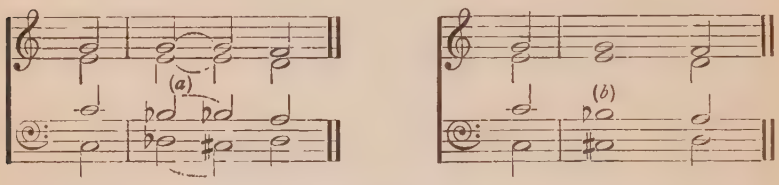
186.—One of the most important points in connection with the chord of the diminished 7th is its capacity for *enharmonic change.* In fact, by enharmonically varying each note in the chord, a diminished 7th can be made to belong to *four* keys, *e.g.*,



We have already seen (§185) that there are three diminished 7ths in every key, derived respectively from the dominant, supertonic, or tonic root; and, as every diminished 7th can be enharmonically varied four times, and there are twelve keys, it follows that *from one diminished 7th we can modulate into every key* by enharmonically varying the chord and then quitting it either as the dominant, the supertonic, or the tonic harmony of the new key. The student should now take the first chord in the above example and quit it (1st) as a dominant, (2nd) as a supertonic, and (3rd) as a tonic discord, each time in a different key. The same process should then be continued with the enharmonic changes of the

chord, and when this is done it will be seen that from the same chord (or rather, from the same sounds) he has modulated into every major (or minor) key.

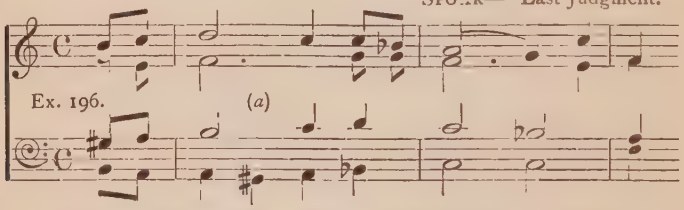
In actual composition the chord to be changed enharmonically, if not required to be repeated, is not written twice, but the notation adopted is generally that of the new key, the enharmonic change being implied or understood, *e.g.*, a modulation from C major to D minor (by means of the enharmonic change of the tonic minor 9th in the former key) would be written as at *b* rather than as at *a*, but if the rhythm require that the chord be struck twice, it is sometimes written as at *a*, but of course without the ties.



The following quotations will show something of the possibilities of modulation by means of the diminished 7th.

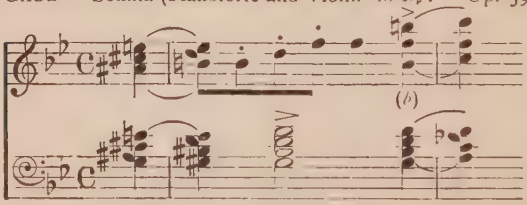
SPOHR—"Last Judgment."

Ex. 196.



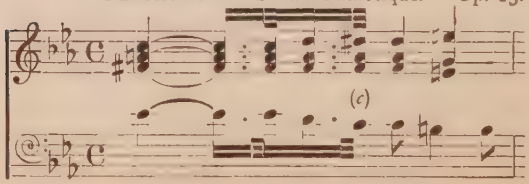
GADE—"Sonata (Pianoforte and Violin in B♭." Op. 59.

Ex. 197.



BEETHOVEN—"Sonata Pathétique." Op. 13.

Ex 198.



BACH—"Organ Fugue in A minor." Vol. IX.†

Ex. 199.

(*d*) (*d*)

MOSCHELES—"Study in E." Op. 70, No. 4.

Ex. 200.

cres. (*e*) *f*

MOZART—"Die Zauberflöte."

Ex. 201.

(*f*)

WEBER—"Euryanthe."

Ex. 202.

(*g*)

BENNETT—"Dawn, Gentle Flower."

Ex. 203.

sf (*h*)

† Peters' Edition.

The following notes will help the student in solving the problems in modulation contained in Exs. 196-203.

(*a*)—Dominant 9th in A minor quitted as supertonic 9th in F major. (G♯ = A♭)

(*b*)—Dominant 9th in A minor quitted as tonic 9th in B♭ major. { G♯ = A♭ / B♮ = C♭ }

(*c*)—Dominant 9th in G minor quitted as dominant 9th in E minor. (E♭ = D♯)

(*d*) { —Supertonic 9th in E minor quitted as dominant 9th in B minor. / —Supertonic 9th in B minor quitted as dominant 9th in A minor. (E♯ = F♮)

(*e*)—Supertonic 9th in E major quitted as tonic 9th in F♯ minor.

(*f*)—Supertonic 9th in G minor quitted as supertonic in B♭ major. (C♯ = D♭)

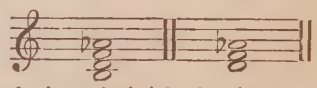
(*g*)—Tonic 9th in D major quitted as dominant 9th in B♭ major. (F♯ = G♭)

(*h*)—Tonic 9th in C♯ minor quitted as tonic 9th in E major. (E♯ = F♮)

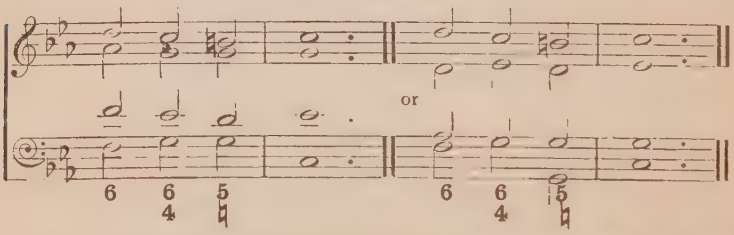
An example of a tonic 9th (in A minor), quitted as a supertonic 9th in E minor (B♭ = A♯) may be found in Ex. 14 (*Appendix*).

The student will observe that some of the above modulations do not imply enharmonic change, and that in a few of them the notation of the primary, rather than that of the new key, is adopted.

187.—If we omit all the notes of the chord of the dominant minor 9th except the upper three, we get as a remainder *the diminished triad on the supertonic of a minor key, e.g.,*



We have already explained the origin of the diminished triad on the leading note (§102), and if we now remember that the diatonic 5th from the supertonic of a minor key is really the minor 9th from the dominant, and must be resolved accordingly, we shall have but little trouble in dealing with this chord. The note usually doubled in four-part writing is the 3rd from the primary bass (§70) or the 7th from the root, and the best position of this chord is when the 3rd from the primary bass is in the lowest part (*i.e.*, the first inversion of the diminished triad).



188.—By this time the student should experience no difficulty in distinguishing between the diminished triad on the leading note of a major scale, and that on the supertonic of its relative minor (*e.g.*, B, D, F on the leading note of C major or the supertonic of A minor), as the connection will at once show him to which key, and hence to which root, the triad belongs.

We give one example of modulation by means of the diminished triad formed by the three upper notes of a chord of the minor 9th.

S. HELLER—"Nuits Blanches." No. 17.

Ex. 204.

At the asterisk the diminished triad formed by the three upper notes of the supertonic 9th in C minor is quitted as the three upper notes of the tonic 9th in D minor.

189.—In five-part writing the most usual doubling in chords of the 9th is that of the 5th; or failing this, the 7th, one 7th descending, the other ascending. In the root position the chord can, of course, be complete (§165). In three-part writing the 5th, 7th, and 9th in a minor key (diminished triad), or 3rd, 7th, and 9th in a major or minor key, are generally employed, *e.g.*,

5th, 7th and 9th. 3rd, 7th and 9th. 3rd, 7th and 9th.

♭5 6/♭4 6 7 4/3 6/2 ♭7 4/♭2 6

190.—As the submediant, mediant, and supertonic of any key are the 9ths of the dominant, supertonic, and tonic respectively, it follows that when these notes occur in the melody, and progress according to the rules given in §§173-179, they may be harmonized as chords of the 9th on the dominant, supertonic, or tonic of the key.

191.—Although sometimes so employed in instrumental music, *in vocal music the dominant 9th is rarely, if ever, used* instead of the dominant triad or the chord of the dominant 7th *in an authentic cadence occurring at the close of a composition.* Its use in middle cadences is, however, fairly common.

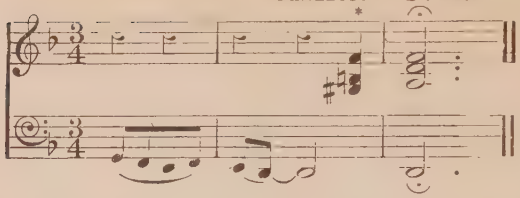
Ex. 205 shows the dominant 9th, and Ex. 206 the supertonic 9th, employed cadentially.

HAYDN—"Seasons."

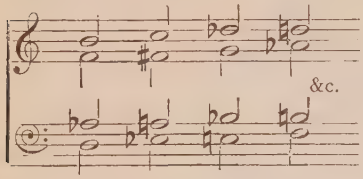
Ex. 205.

BENEDICT—"St. Peter."

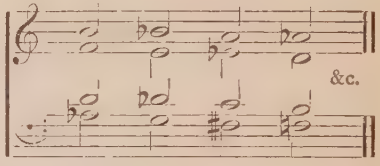
Ex. 206.



192.—A sequence of diminished 7ths (unlike one of supertonic or tonic 7ths, §120) can be used without involving modulation, each diminished 7th having for its root either the dominant, supertonic, or tonic of the key, *e.g.*,



Roots—G, D, C, G.

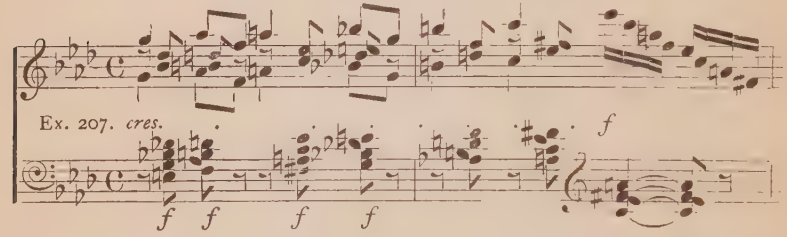


Roots—G, C, D, G.

We give two examples of sequences of diminished 7ths, the first ascending, the second descending.

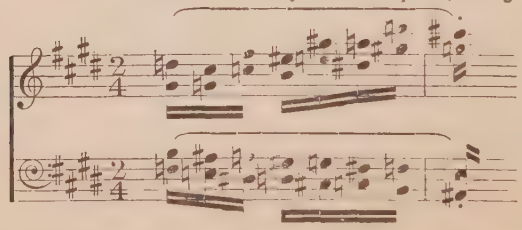
BENNETT—"Sonata in F minor." Op. 13.

Ex. 207.



CHOPIN—"Study in E." Op. 10, No. 3.

Ex. 208.



Ex. 208 is the first of three fine sequences which space does not permit us to quote. A reference to the original will well repay the student.

Questions on Chapter XIV.

1.—How is the chord of the 9th constructed?

2.—What is the difference between a major and a minor 9th?

3.—What name was formerly given to chords of the 9th?

4.—What degrees of the scale are employed to form the chord of the dominant 9th?

5.—Write and correctly figure chords of the 9th upon the dominant, supertonic, and tonic of several major and minor scales.

6.—For what reason are minor 9ths permitted in major keys?

7.—Can *any* major 9th be used in a minor key?

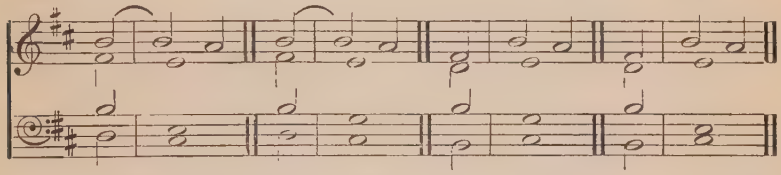
8.—What major 9ths cannot be used in minor keys, and for what reason?

9.—Why cannot the complete form of the chord of the 9th be used in four-part harmony? What notes are generally omitted (*a*) in the root position and (*b*) in the inversions, and for what reason?

10.—What intervals are essential to the chord of the 9th?

11.—On the note C write a fundamental 9th, a suspended 9th, and a 9th as a passing or as an auxiliary note.

12.—Correctly classify the 9ths in the following, and figure the bass:—



13.—What compound intervals are, for the purposes of figuring, regarded as simple?

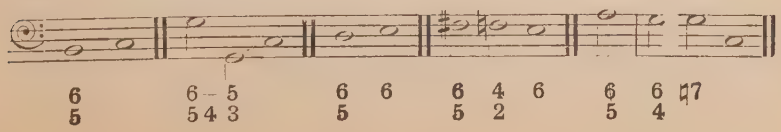
14.—Of how many inversions are chords of the 9th susceptible?

15.—Give the figuring of the inversions, and state the difference between the figuring of dominant and chromatic 9ths.

16.—What intervals are implied in the figuring of the fundamental 9th and its inversions?

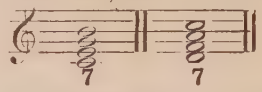
17.—How do you distinguish between those positions of fundamental 7ths and 9ths which are identically figured?

18.—Fill up, describe, and give the roots of the following harmonies:—



19.—Give a rule for finding the root of a fundamental discord.

20.—Why is C not the root of the first, nor D the root of the second of the following chords?—



21.—Under what circumstances is it impossible for a fundamental 9th to be prepared by an 8ve?

22.—Upon what harmonies may the dominant 9th resolve?

23.—Show how the dominant 9th progresses

(*a*) When resolving upon its own root.
(*b*) When resolving upon supertonic harmony.
(*c*) When resolving upon tonic harmony.

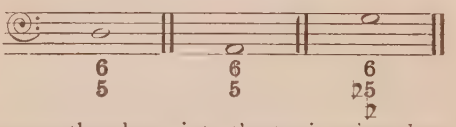
24.—Show how the supertonic 9th progresses

(*a*) When resolving upon its own root.
(*b*) When resolving upon dominant harmony.
(*c*) When resolving upon tonic harmony.

25.—Show how the tonic 9th progresses

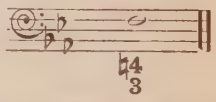
(*a*) When resolving upon its own root.
(*b*) When resolving upon dominant harmony.
(*c*) When resolving upon supertonic harmony.

26.—Resolve each of the following chords in as many different ways as possible:—



27.—Transpose the above into the tonic minor key.

28.—Resolve the following chord:—
(*a*) as a dominant 9th, (*b*) as a supertonic 9th, and (*c*) as a tonic 9th.



29.— Under what circumstances is the 3rd omitted in the chord of the dominant 9th?

30.—Write and resolve

(*a*) The first inversion of the dominant 9th, key B.
(*b*) The second inversion of the supertonic 9th, key A.
(*c*) The third inversion of the tonic 9th, key F.

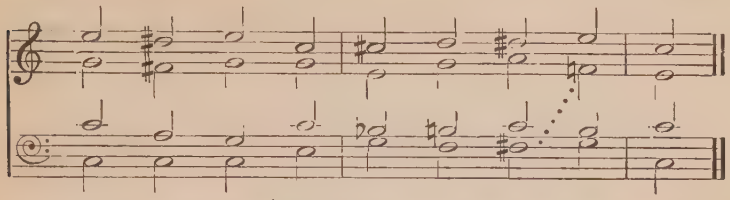
31.—Transpose the above into the tonic minor key.

32.—What resolution of the 9th is more suited to instrumental than to vocal music?

33.—Name a particular case of unobjectionable doubling of the major 3rd in the common chord.

34.—Why are minor 9ths sometimes written as augmented 8ves? Give examples of false notation in supertonic and tonic 9ths.

35.—Discover, demonstrate, and correct instances of false notation in the following :—



36.—Is there a false relation between the last two chords of the second bar?

37.—Which of the fundamental 9ths resolve most frequently upon their own roots?

38.—Give an example of the ornamental resolution of a 9th, and one of its transference from one part to another.

39.—What progression of the 7th in the second inversion of chords of the 7th is common to chords of the 9th? Give examples in the key of D minor.

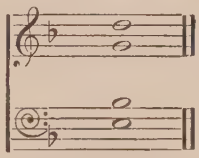
40.—When may the 7th in a chord of the dominant 9th descend to the tonic? Give examples in the key of B minor.

41.—Give two reasons for the unpleasant effect of the fourth inversion of the dominant major 9th.

42.—In chords of the 9th should the 9th be above or below the 3rd?

43.—What error is likely to occur in the resolution of a 9th when the 5th is below the 9th, and how can this error be best avoided?

44.—Correctly resolve :—

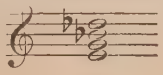


45.—Write chords of the "leading" and "diminished" 7ths on the note A.

46.—Why are these chords so termed, and was the diminished 7th known by any other name?

47.—From what form of the minor scale are the notes employed in the chord of the diminished 7th derived? Can this chord be used in a major key? What interval exists between each of its notes?

48.—Why is the chord of the diminished 7th so useful?

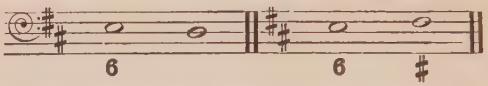
49.—Resolve this chord  (*a*) as a dominant 9th (*b*) as a supertonic 9th, and (*c*) as a tonic 9th.

50.—From the chord modulate into every key.

51.—What is the root of the diminished triad on the supertonic of a minor key?

52.—In what respect does the first inversion of the diminished triad on the supertonic resemble the first inversion of that upon the leading note, and how can you distinguish between the diminished triad on the supertonic of a minor key, and the diminished triad upon the leading note of its relative major key?

53.—Fill up, describe, and give the roots of the following:—



54.—What intervals in the chord of the 9th may be doubled in five-part writing, and what may be omitted in three-part?

55.—Can the dominant 9th ever replace the dominant 7th in a cadence?

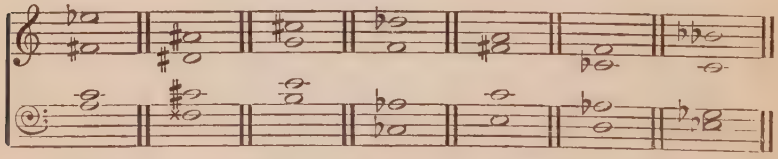
56.—When may we use the dominant 9th in harmonizing a melody?

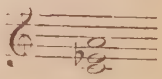
57.—Write and resolve dominant, supertonic, and tonic 9ths on the note, and also in the key of B.

58.—On the note D write and resolve the first inversion of a dominant, a supertonic, and a tonic 7th; and, upon the same note, the first inversion of a dominant, a supertonic, and tonic 9th.

59.—Write a chord of the $\frac{6}{5}$ upon the leading note of A major, and one upon the supertonic of F♯, in each case giving the root and the resolution.

60.—Give the roots, figurings, and resolutions of the following discords:—



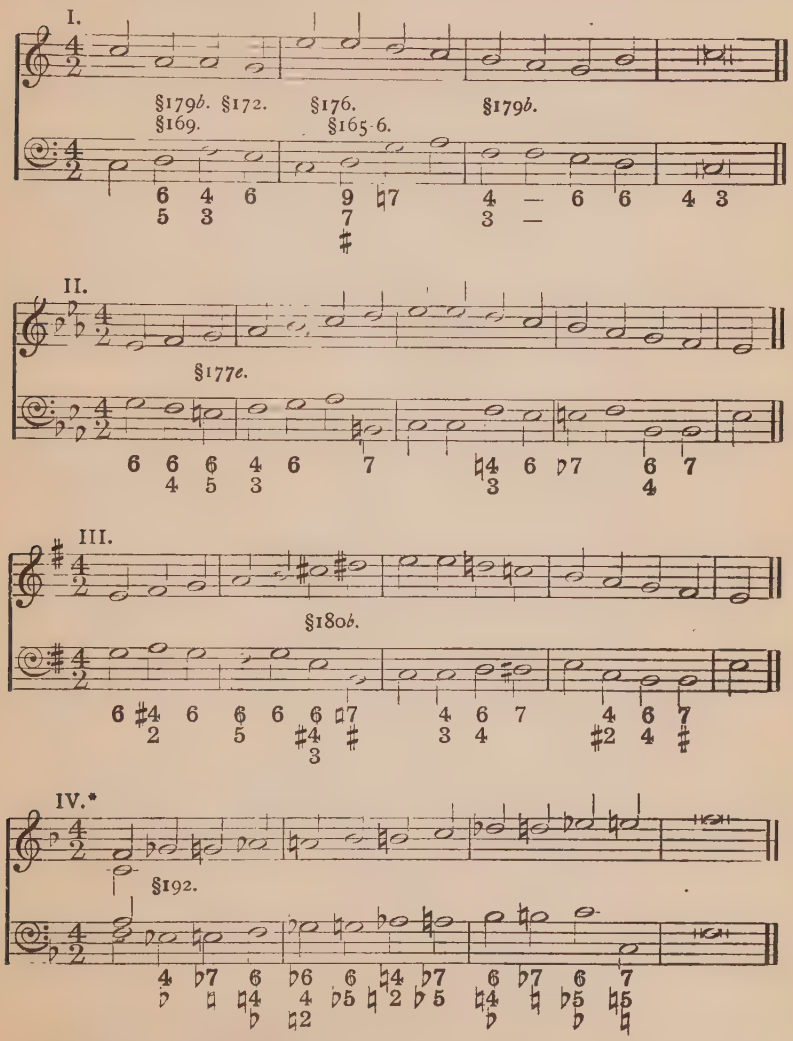
61.—Resolve the following chord in two different ways and into different keys:— 

62.—Resolve the chords given in questions 30 and 60, introducing as many suspensions as possible into the chords of resolution.

63.—What do you understand by "convenient" and "false" notation?

Exercises on Chapter XIV.

Carefully describe and note the resolution of every 9th. The roots of all discords and inverted chords should be written on a separate staff or denoted by a capital letter.



* The student should endeavour to re-write this exercise, using the more conventional and convenient (but less accurate) notation.

V.

§192. §179a.

VI. (Changeable.)

§180a. §176. §175a.

VII. (C.M. "Dundee.")

§183. §41b.

§176. §183.

VIII.

§182. §175a. §174b.

* Double the 7th from the root.

IX. (Double Chant.)

§173*b*. §180*a*. §180*b*.

6 4 — 6 6 6 ♮4 4
3 — 5 3 2

§152.
§166*c*.

6 4 — 6 ♯4 6 9 ♭7
3 — 3 ♮

X. §172. §179*b*. §174*b*.

7 4 ♯4 6 ♭7 9 8 ♯ 6 — 6 7 — 4 ♯—
♯2 3 4 3 ♯ ♯4 6 ♮5 6 4
2 —

§187.

6 6 6 4 ♯4 6 6 ♯4 6 4 6 6 6— 4 ♯
4 ♯2 3 4 2 ♯2 4 5 4

XI. † ‡ §186.

7 6 6 6 ♭7 6 ♯5 6 ♮7
5 5 ♯
♭

XII.

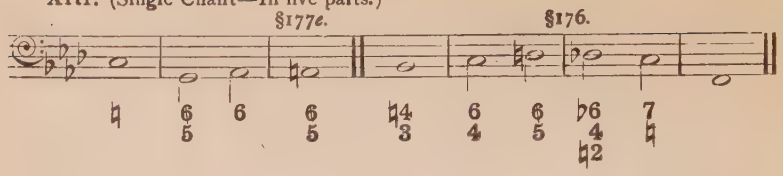
9 7 8 6 ♯4 7 8 ♯4 7 9 8 ♯7 8 6 ♮5 6 6
7 6 5 3 ♯5 6 3 3 5 ♭
4 3 4 3

§102. §163.

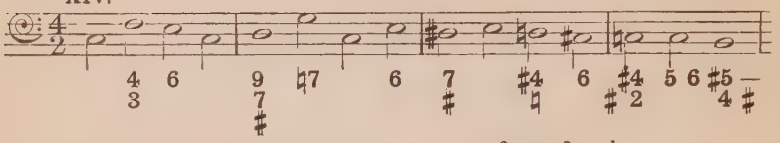
9 — 7 8 ♮4 ♭7 4 6 6 6 5
7 — 6 5 ♭ ♭5 ♯2 4 ♮4 3
3 3 3 4 3

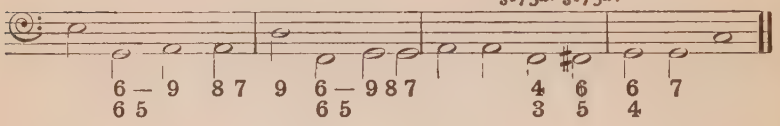
† F♯ = G♭, supertonic 9th in E♭. ‡ E♮ = F♭, tonic 9th in E♭.

XIII. (Single Chant—In five parts.)



XIV.





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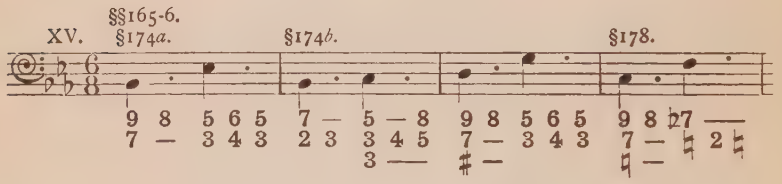

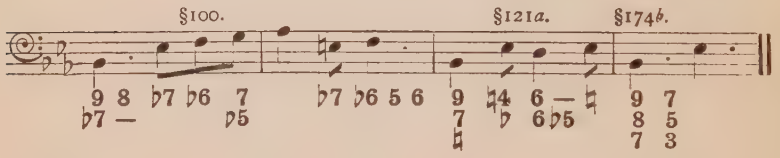

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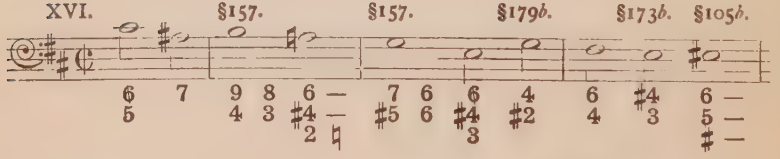
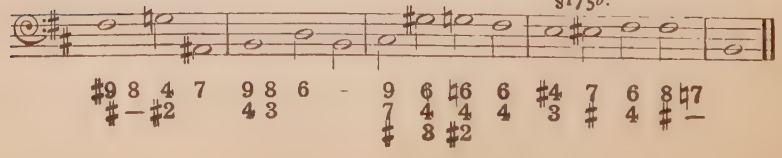
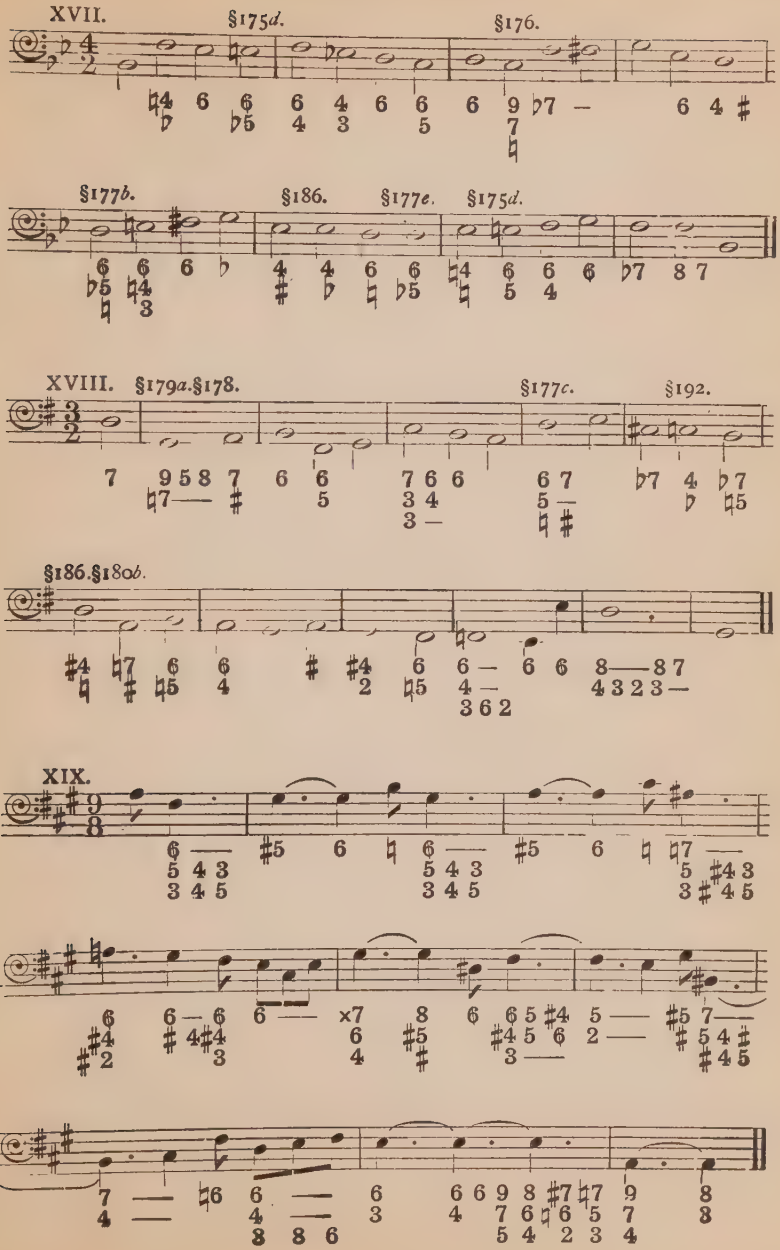
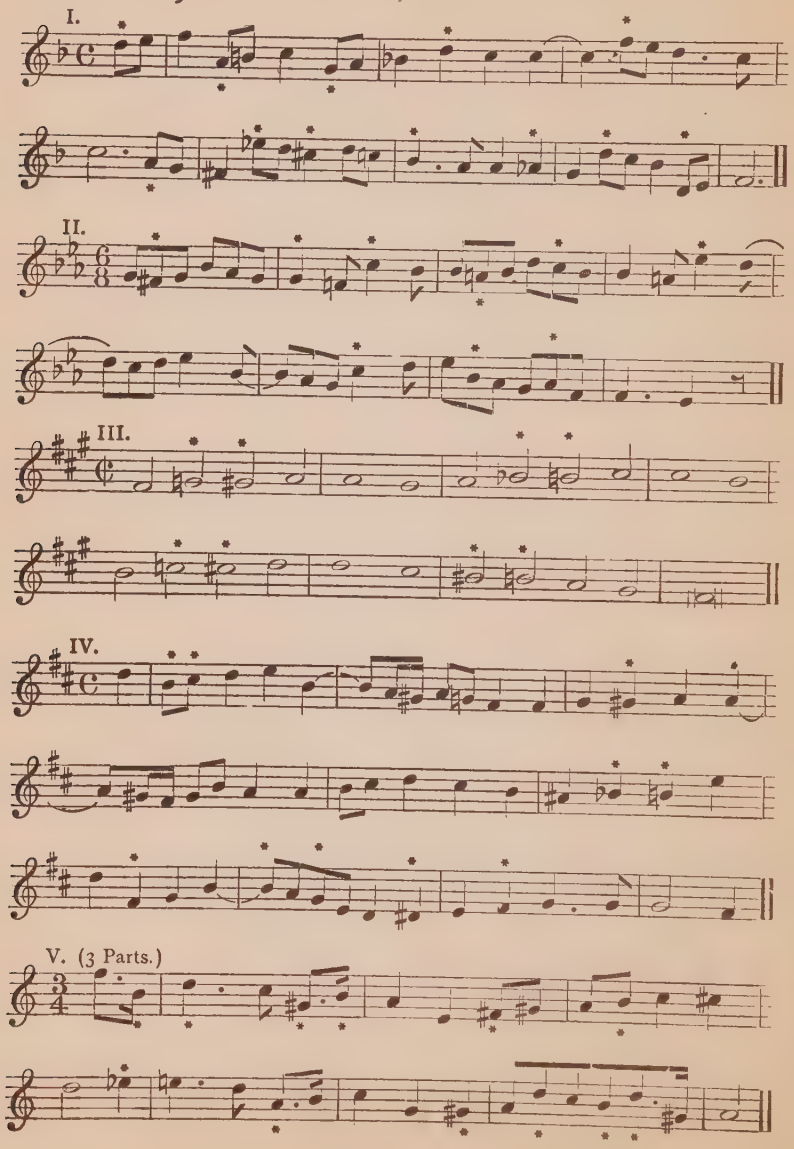





XVII.
§175d.
§176.
§177b.
§186.
§177e.
§175d.
XVIII.
§179a.§178.
§177c.
§192.
§186.§180b.
XIX.

MELODIES.

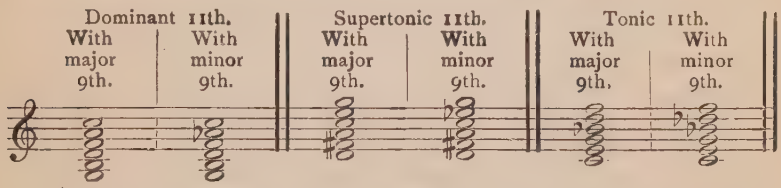
The notes marked with an asterisk may be harmonized as parts of chords of the 9th.



CHAPTER XV.

Chords of the Eleventh.

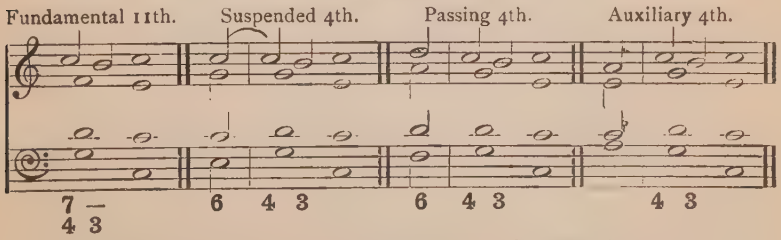
193.—If to the fundamental chords of the major or minor 9th on the dominant, supertonic, or tonic (Chap. XIV.), we add, in accordance with the key signature, a 3rd above the 9th, we obtain a chord known as that of the 11th, and containing a major 3rd, a perfect 5th, a minor 7th, a major or minor 9th (§164), and a perfect 11th.



194.—The existence of a minor as well as a major 9th gives rise to two forms of the chord of the 11th. *Both* these forms may be used in a *major key*, but dominant and supertonic 11ths containing major 9ths cannot be used in a minor key (§164) except as stated in §§174 and 214.

195.—*The interval of the 11th*, being a compound 4th, *is always perfect*, and unlike that of the 9th (§§143*a*, 167), *is regarded as simple for the purposes of figuring* (§22). It may be distant either a 4th or an 11th from the root.

196.—The chord of the 11th, having six notes, requires the omission of at least two notes when employed in four-part harmony. But whatever notes be selected, *the interval of the 7th from the root must be retained* in the chord or its chord of resolution, as in the case of the chord of the 9th (§166), in order to distinguish it from a suspended 4th (§142), or a 4th occurring as a passing or auxiliary note (Chap. XII.).



If, in the last three of these examples, F be substituted for G in the alto, we get a chord of the fundamental 11th either prepared or introduced by contrary motion with the bass (§74).

197.—The 11th generally resolving upon the 10th (*i.e.*, the 4th upon the 3rd) in accordance with the rule given in §88, *the 3rd from the root*

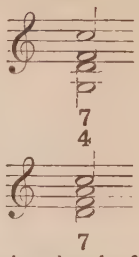
of a chord of the 11*th is almost always omitted*, whatever form of the 11th be adopted, in order that the 3rd, the note of resolution for the 4th or 11th, may not be heard at the same time as the 11th (§141).

198.—The two most important and useful forms in which the chord of the 11th appears are those containing

Root, 5th, 7th and 11th,

or

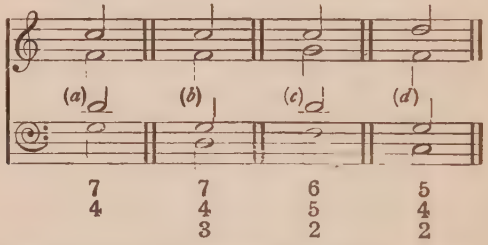
5th, 7th, 9th and 11th,



the latter form being the second inversion of the chord of the dominant 11th with the root and 3rd omitted.

199.—Remembering that every form of the chord of the 11th must contain a 7th (§196), the student should have no difficulty in discovering such comparatively rare cases as are to be found of the employment of forms of the 11th other than those here given. Nor should he have any difficulty in figuring the various forms of the 11th if he remember that all figuring is merely a system of calculation from the bass note, the highest number being invariably placed uppermost (§22). (*See Appendix.*)

200.—We now give the root positions and inversions, together with the figuring, of the first of the most frequently used forms of the chord of the dominant 11th.

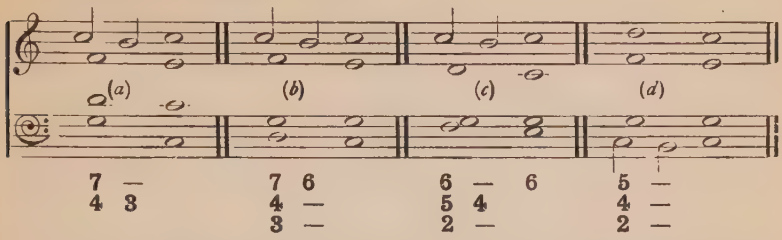


As the above chords do not contain the 9th, they will be identical in both a major and its tonic minor key. At *b* we have the *second* inversion of the dominant 11th, the 5th from the root being in the bass (§64); at *c* the *third* inversion, the 7th being in the bass; and at *d* the *fifth* inversion, the 11th being in the bass. The 3rd and 9th from the root being omitted, the first and fourth inversions in this form of the dominant 11th are consequently impossible.

201.—*The dominant* 11*th generally resolves upon its own root*,* the 11th resolving before the other notes by descending one degree (§88),

* *Vide* §200.

and the remaining notes proceeding according to the rules given in the preceding chapters (§§96, 174).

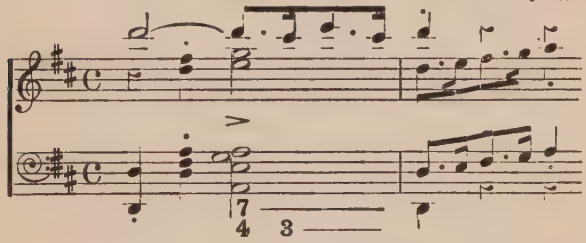


The above should be transposed into the tonic minor and correctly figured.

The following examples will show the above resolutions as exhibited in the works of the great masters.

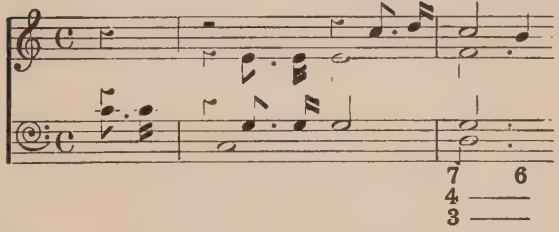
WEBER—"Sonata in D minor." Op. 49.

Ex. 209.



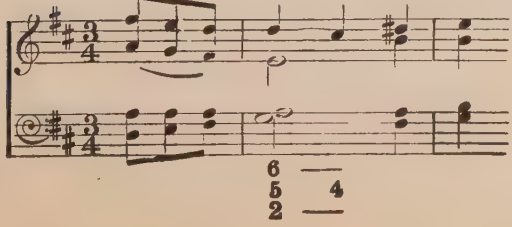
CHERUBINI—"2nd Mass."

Ex. 210.

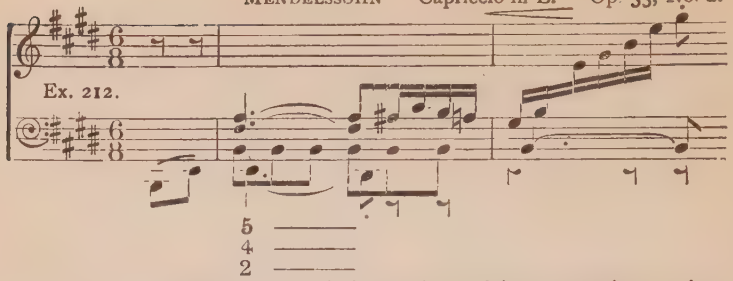


BEETHOVEN—"Symphony in D." Op. 36.

Ex. 211.

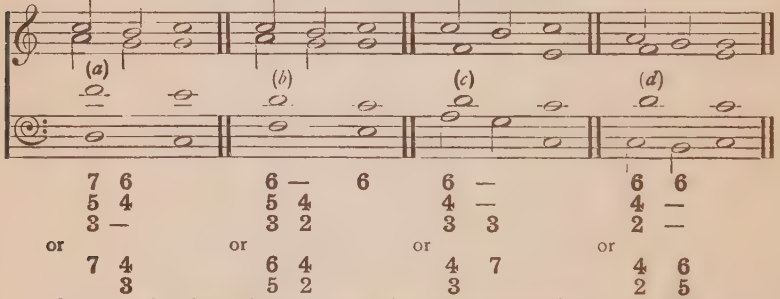


MENDELSSOHN—"Capriccio in E." Op. 33, No. 2.



As each of these examples is in the key of its respective tonic, no further explanation should be needed.

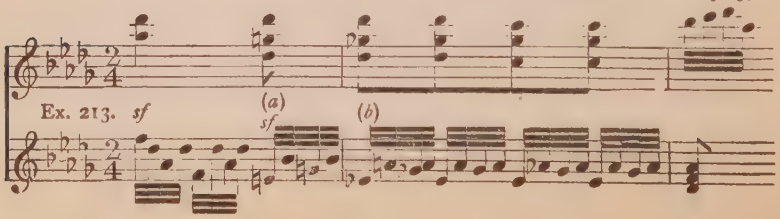
202.—We now give that form of the dominant 11th in which the root and the 3rd are omitted, and which, as shewn at *a*, is really the second inversion of the dominant 11th. The third, fourth, and fifth inversions of this form, and their resolutions, are shewn at *b*, *c*, and *d*. The chord at *a* is sometimes termed the *diatonic* 7th on the supertonic (*vide* Chap. XVIII.), and must not be confounded with the *chromatic* chord of the 7th on the supertonic which has a major (chromatic) and not a minor 3rd. The chord of the diatonic supertonic 7th is also called *the chord of the minor 3rd and 7th*, or, when containing the minor 9th of the dominant, *the chord of the minor 3rd, 5th, and 7th*, and regarded as a double root chord (*vide* Chap. XVII.) on the dominant and supertonic.



In a major key the 9th may be major or minor, *e.g.*, A♮ might have been used instead of A♭ in the above progressions.

In the following illustrations the 9th is alternately minor and major.

BEETHOVEN—"Sonata Appassionata." Op. 57.



HANDEL—"6th Chandos Anthem.

Ex. 214.

(*c*)

MENDELSSOHN—"Organ Sonata." No. 4.

Ex. 215.

(*d*) (*e*)

BACH—"Organ Fugue in E♭ (St. Anne's)." Vol. III.†

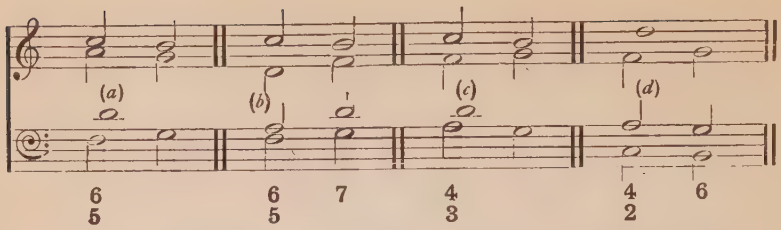
Ex 216.

(*f*)

At *a* the supertonic minor 9th, F♭ in the key of D♭, is written as an augmented 8ve, and at *b* the minor 9th (B♭♭) in the second inversion of the second form of the chord of the dominant 11th in D♭ is similarly noted. At *c* we have the third inversion of the second form of the dominant 11th in E♭, the 7th ascending (§203). Here the 9th is major. At *d* and *e* the minor 9ths of 11ths on C and F (supertonic and dominant in the key of B♭) are in the bass. At *f* the 11th is in the bass, the 9th being major. The G in the tenor is an auxiliary note (§127). Note that in every case, except at *c*, the chord of resolution is that of a dominant 7th.

203.—The above form of the dominant 11th affords another instance of a chord with the root omitted. In these cases *the notes which* (although dissonant with the root) *are consonant with the primary bass* (§70) *are free in their progression;* only those which are dissonant with the primary bass having a compulsory movement. Hence, in the above resolutions, the 7th from the root, not being dissonant with the primary bass, may *ascend*, or the 5th, 7th and 9th may *leap, e. g.*

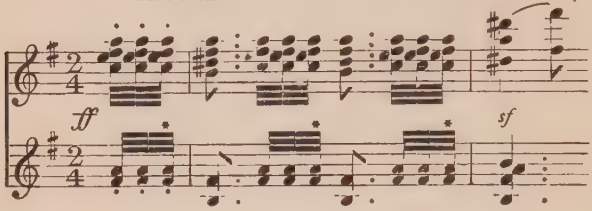
† Peters' Edition.



The ascending 7th, at least in the bass, having been illustrated in **Ex. 214**, we append examples of 5ths and 9ths leaping.

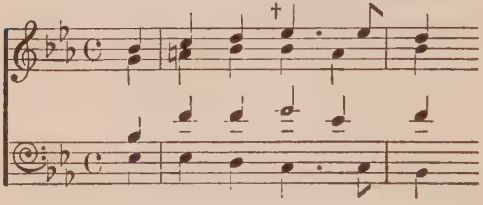
Ex. 217.

MENDELSSOHN—"Lieder ohne Worte." No. 27.



Ex. 218.

HANDEL—"Belshazzar."



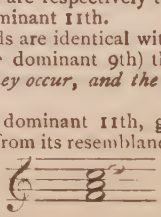
204.—The student should now transpose the examples given in §§202 and 203 into the tonic minor key. The 9th from the root will then be *minor*, and being dissonant with the 5th, *cannot leap* (as in §203 *b*), but must descend to the root.

205.—With reference to the simple four-part examples in §202, we observe that

(*a*) The chords at *a*, *b*, *c*, and *d* are respectively the second, third, fourth, and fifth inversions of the chord of the dominant 11th.

(*b*) The figurings of these chords are identical with those of the dominant 7th, from which (like the inversions of the dominant 9th) they may be distinguished by *the degrees of the scale upon which they occur, and the quality of the intervals they imply* (§§146, 169).

(*c*) The third inversion of the dominant 11th, given at §202 *b*, was formerly known as the chord of *the added 6th*, from its resemblance to a common chord on the subdominant with a 6th added, *e.g.*,



* 5th falls to root. † 9th falls to 7th.

206.—When the dominant 11th resolves upon another root (either supertonic or tonic), *the 11th generally remains stationary*, the form adopted being, as a rule, that given in §202.

We give examples of the first and second forms of the dominant 11th resolved directly upon the tonic chord :—

SCHUMANN—"Novelletten." No. 8.

Ex. 219.

(*a*) (*b*)

SPOHR—"Last Judgment."

Ex. 220.

(*c*).

Note the ascent of the 7th at *a* and *b*. The 11th from the dominant, being the tonic, remains stationary and forms the 8ve from the root of the chord of resolution. This particular resolution of the 11th is identical in a major or a minor key, as may be seen by comparing *a* and *b*, or transposing Ex. 220 into the key of D minor. It is sometimes used cadentially at the close of a composition, *e.g.*, the final chords of the Schumann "Novelletten," from which Ex. 219 is taken.

207.—To resolve the second form of the dominant 11th (§202) on to a supertonic 7th, we have only to raise the 7th a chromatic semitone (*a*, *b*), or the 7th and 9th if the chord contain a minor 9th (*c*).

(*a*) (*b*) (*c*)

We give two illustrations of this resolution, the first in the key of G♭ major, the second in D minor. At *a* the 11th proceeds to a supertonic 7th, at *b* to a supertonic 9th.

BEETHOVEN—"Quartett in B♭." Op. 130.

Ex. 221.

(*a*)

BEETHOVEN—"Pastoral Sonata." Op. 28.

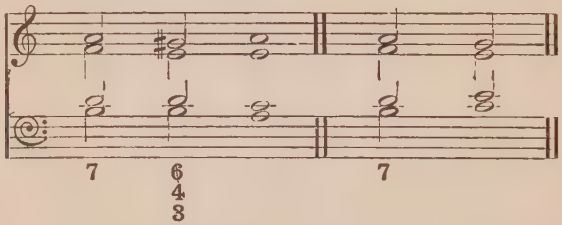
Ex. 222.

cres. (*b*) *p*

sempre staccato.

Note the irregular resolution of the supertonic 7th in Ex 221 (*Vide* §118.)

208.—The second inversion of a dominant 11th in a minor key is identical with the first inversion of a major 9th in the relative major key (§168), from which it can only be distinguished by its *connection* and *resolution*, *e.g.*,



Dom. 11th. Second inversion. Dom. 9th. First inversion.
Root E. Key A minor. Root G. Key C.

The usefulness of this chord for the purposes of modulation between a major and its relative minor key will be at once apparent. Also supertonic and tonic 9ths may be quitted as dominant 11ths, and *vice versâ*. We give some illustrations of these modulations.

MACKENZIE—"Rose of Sharon."

Ex. 223.

(*a*)

GADE—"Sonata (Pianoforte and Violin) in D minor." Op. 21.

Ex. 224.

sf (*b*) *p* *mf*

MENDELSSOHN—"Rondo Capriccioso." Op. 14.

Ex. 225.

sf (*c*)

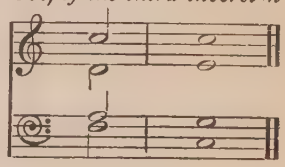
LISZT—"Consolations." No. 2.

Ex. 226.

(*d*)

At *a* the chord of the dominant 9th in A♭ is quitted as the dominant 11th in F minor. At *b* the supertonic 9th in F major is quitted as the dominant 11th in A minor. At *c* the tonic 9th in G major is quitted as the dominant 11th in A minor; while at *d* a harmony, which the connection (which want of space forbids us to quote) proves to be that of the dominant 11th (with minor 9th) in E major, is quitted as the supertonic 9th in C major (§175, *a*).

209.—The *bass note* (*i.e.* the 7th from the root) *of the third inversion of an 11th containing a 9th* (§202), *frequently falls a 4th*, as in the third inversion of a 9th (§180, *b*), *e.g.*,



Here the 9th may be major or minor, the latter being sometimes used even in a major key. This particular progression of the 11th, when occurring at the cadence, affords, as compared with §206, another instance of the chord of the dominant 11th used cadentially at the close of a composition, instead of the chord of the dominant 7th. The root of the first chord being the dominant, the cadence is really authentic (§53) and not plagal (§54), the character of a cadence being determined by the progression of the *roots* (and not the *basses*) of the penultimate and final chords. The second form of the dominant 11th is very frequently used in middle cadences.

The following illustration shows the above progression in the keys of C major and its relative minor.

CHOPIN—"Nocturne in G minor." Op. 15, No. 3.

Ex. 227.

210.—Occasionally the 11th is combined with the root, 7th, and 9th, in which case *the 11th and 9th resolve upon the same root by ascending* in a manner similar to that of chords of the 9th given in §174*b*; *e.g.*,

MENDELSSOHN—"Fugue in A♭." Op. 35, No. 4.

Ex. 228.

Sometimes, however, the 11th and 9th descend, as in Ex. 64, *Appendix*.

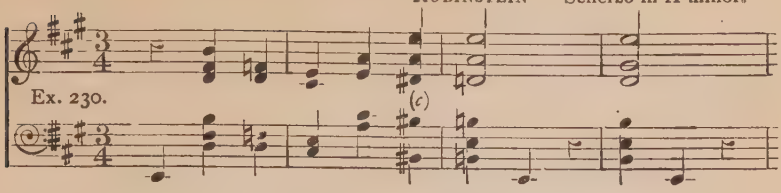
211.—*Tonic and supertonic 11ths*, especially the latter, *are extremely rare*. Although, when occurring, it is possible to resolve either of these chords on one of the other two fundamental harmonies of the key (viz., dominant or supertonic, and tonic or dominant respectively), they generally resolve upon their own roots, the 11th descending, or upon the dominant, the 11th remaining stationary. We give an example of both methods, first in a supertonic, and then in a tonic 11th. The student should carefully observe that whatever notes may be selected to form chords of the 11th on the supertonic or tonic, at least one chromatic note must be included.

BENEDICT—"St. Peter."

Ex. 229.

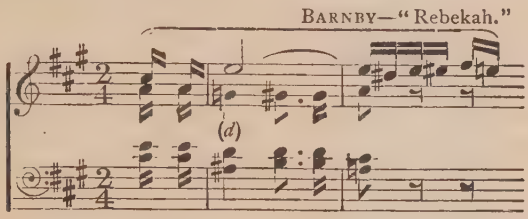
RUBINSTEIN—"Scherzo in A minor."

Ex. 230.



BARNBY—"Rebekah."

Ex. 231.



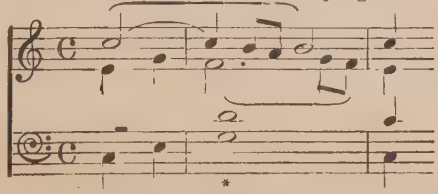
At *a* the tonic 11th in B♭, 5th, 7th, minor 9th (B♮ = C♭) and 11th, resolves on its own root, the chord of resolution being a tonic 9th (B♮ = C♭). At *b* we have a similar form and resolution of the supertonic 11th, but here there is no false notation, and the bass F must be looked upon as a dominant pedal. At both *a* and *b* the 11ths resolve by falling one degree. At *c* we have the supertonic 11th in A, consisting of 3rd (D♯), 7th, minor 9th (B♯ = C♮), and 11th of the supertonic, B.* At *d* we have the tonic 11th in A composed of 5th, 7th (G♮), minor 9th (A♯ = B♭), and 11th. Observe that while both supertonic and tonic 11ths remain stationary when resolving on the dominant, the chord of resolution at *c* is a dominant 11th, and at *d* it is a dominant 7th. (*See Appendix.*)

212.—Like chords of the 7th and 9th, chords of the 11th may resolve *ornamentally*, or may have their dissonant intervals transferred from one part to another (§§105, 118, 179).

In Ex. 232 we have one of the most common ornamental resolutions of the dominant 11th. In Ex. 233 the 11th is transferred from the inside to the upper part.

SPOHR—"Last Judgment."

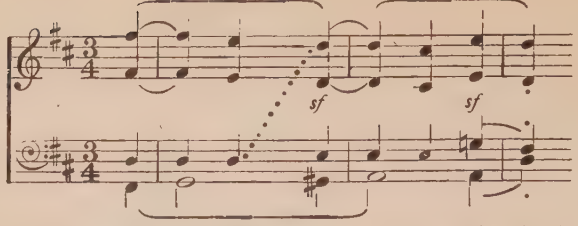
Ex. 232.



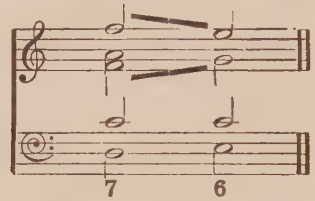
* Some authorities would term the chord at *c* a supertonic 9th, regarding the E in the melody as an anticipation.

BEETHOVEN—"Pastoral Sonata." Op. 28.

Ex. 233.



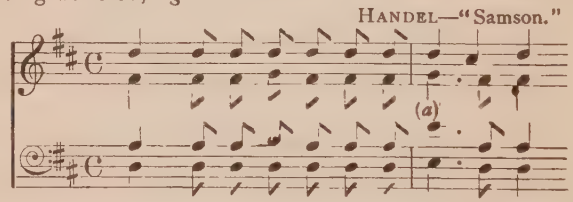
213.—In five-part harmony we double, in the chord of the 11th, either the root or 5th, whichever note is present in the form selected for use. The 7th in the dominant 11th may be doubled, provided the resolution be such as either to permit the upper 7th to descend and the lower to ascend, or to allow the 7ths to proceed in contrary motion.



214.—The most usual forms of the chord of the 11th in three parts are those containing the root, the 7th and the 11th, or the 5th, 7th and 11th. The latter form is also used in four-part writing, the 5th (*a*) or 7th (*b*) being doubled, *e.g.* :—

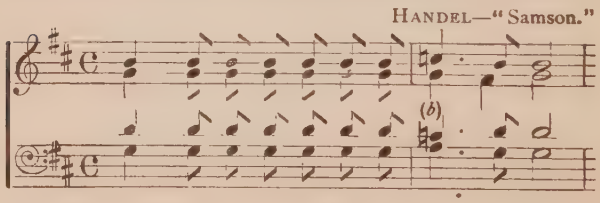
HANDEL—"Samson."

Ex. 234.



HANDEL—"Samson."

Ex. 235.



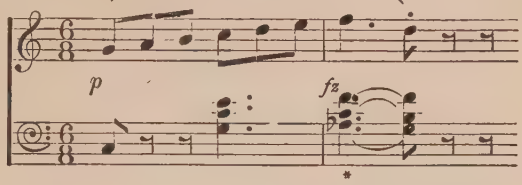
But if we employ the 7th, 9th, and 11th, we have no note dissonant with the primary bass. Such a chord is a concord, and is therefore perfectly free in its progression, as is also the chord derived from the three upper notes of the dominant major 9th.

The student will now see that the supertonic triad is merely the 5th, 7th, and 9th of the dominant, and that the subdominant major

triad is the 7th, major 9th, and 11th of the dominant, and the subdominant minor triad the 7th, minor 9th, and 11th of the dominant. We have already seen that the subdominant minor triad can be used in a major key (§54), and, with the 9th generally ascending, the subdominant *major* triad may be used in a minor key. We give examples of both of these triads in their first inversions :—

HELLER—"Tarantelle in A minor." Op. 85, No. 1.

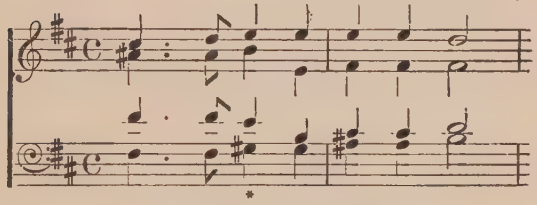
Ex. 236.



1st inversion, subdominant minor triad in C major.

HANDEL—"Solomon."

Ex. 237.

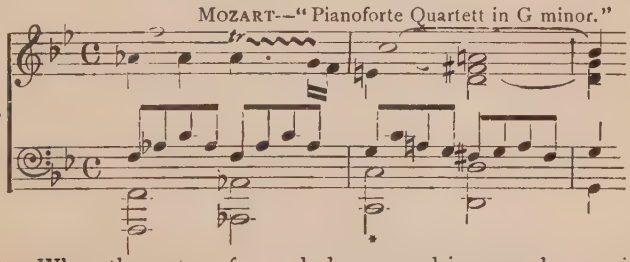


1st inversion, subdominant major triad in B minor.

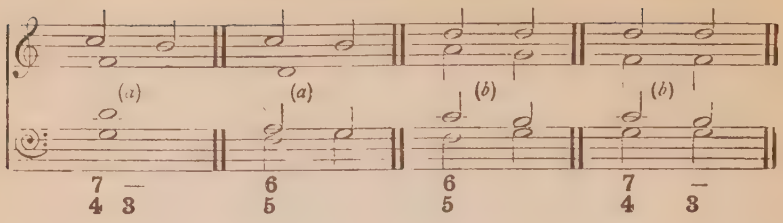
The major triad on the subdominant of a minor key is often used for the purposes of modulation. In the following quotation, the dominant chord of F minor is quitted as the major chord on the subdominant (dominant 7th, major 9th and 11th) of G minor.

MOZART—"Pianoforte Quartett in G minor."

Ex. 238.



215.—When the notes of a melody proceed in accordance with the direct resolution of the dominant 11th, or progress from tonic to leading note, they can generally be harmonized as a dominant 11th resolving upon its own root (*a*). Also, when we have a sustained or repeated supertonic at the cadence, we may always treat it in the manner just described (*b*). A repeated tonic as the penultimate and final notes of a phrase may be harmonized as in §209.



Questions on Chapter XV.

1.—Describe the formation of the chord of the 11th.

2.—How does the 11th in a major key differ from the same chord when occurring in a minor key?

3.—What degrees of the scale are employed to form the complete chord of the dominant 11th?

4.—What chords of the 11th cannot be used in minor keys?

5.—What have you to remark concerning the quality, figuring and position of the interval of the 11th?

6.—What interval from the root of the 11th is generally omitted, and what always retained, and for what reasons?

7.—Must an 11th be prepared?

8.—Name the degrees of the scale, and intervals from the root, employed in the most common forms of the 11th.

9.—Are both these forms identical in a major and its tonic minor key?

10.—Write out and figure both forms of the dominant 11th in various major and minor keys.

11.—What inversion of an 11th is rarely, if ever, used?

12.—What name is sometimes given to the second inversion of the dominant 11th containing a 7th and 9th from the root?

13.—What name is also given to the third inversion when similarly constructed?

14.—What is the most usual resolution of the dominant 11th?

15.—In a fundamental discord has every note dissonant with the root a compulsory progression?

16.—When is the 9th in a dominant 11th free in its progression?

17.—Does the dominant 11th ever resolve upon another root, and if so, how does the 11th progress?

18.—How do you distinguish between the figurings of 11ths, 9ths, and 7ths?

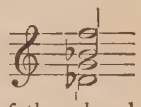
19.—Write a chord of the $\frac{6}{5}$ upon the supertonic, subdominant, and leading note of F♯ minor. Resolve and describe each chord.

20.—Upon the note E♭ write, resolve, and figure the third inversion of a dominant 7th, the fourth inversion of a dominant 9th, and the 5th inversion of a dominant 11th.

21.—Give examples, in various major and minor keys, of the dominant 11th and its inversions resolving directly upon the tonic chord.

22.—What form and inversion of the dominant 11th can be most easily converted into a supertonic 7th?

23.—Resolve the following chord in two different ways and into two different keys, in each case describing the chord and giving its root.



24.—Modulate from B minor to D major by means of the chord of the dominant 11th.

25.—Name the particular cases in which the dominant 11th is used cadentially. Give examples in the key of G minor.

26.—Is the name of a cadence determined by the progression of the basses or by that of the roots of the penultimate and final chords?

27.—Name a particular case in which a dominant 11th may ascend.

28.—Name as many instances as you can in which the treatment of dominant 11ths resembles that of other fundamental discords.

29.—Which of the three fundamental 11ths is the rarest?

30.—How do tonic and supertonic 11ths usually resolve?

31.—Write, and resolve upon the dominant, the third inversion of a tonic 11th in G minor.

32.—Resolve the same chord upon some form of the supertonic harmony.

33.—What intervals of the chord of the dominant 11th may be doubled in five-part writing?

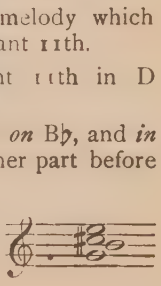
34.—What forms of the 11th are generally employed in three-part harmony?

35.—Name some particular progressions in the melody which indicate the possibility of the employment of the dominant 11th.

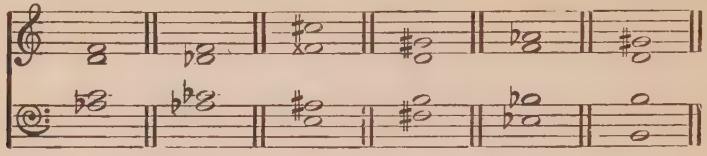
36.—Give ornamental resolutions of the dominant 11th in D minor.

37.—Write the third inversion of the dominant 11th *on* B♭, and *in the key of* B♭, and in each case transfer the 11th to another part before finally resolving it.

38.—Resolve this chord:—(*a*) as a dominant 9th, (*b*) as a supertonic 9th, (*c*) as a tonic 9th, (*d*) as a dominant 11th descending, and (*e*) as a dominant 11th remaining stationary.



39.—Figure the bass, describe, and give the roots and resolutions of each of the following chords :—



40.—Upon the note D write an added 6th, a supertonic 6th, a leading 7th, a flat 7th,* and a chord of the minor 3rd, 5th, and 7th. In each case give the root, key, figuring, and resolution.

41.—Resolve the chords given in question 39, introducing as many suspensions as possible into the chords of resolution.

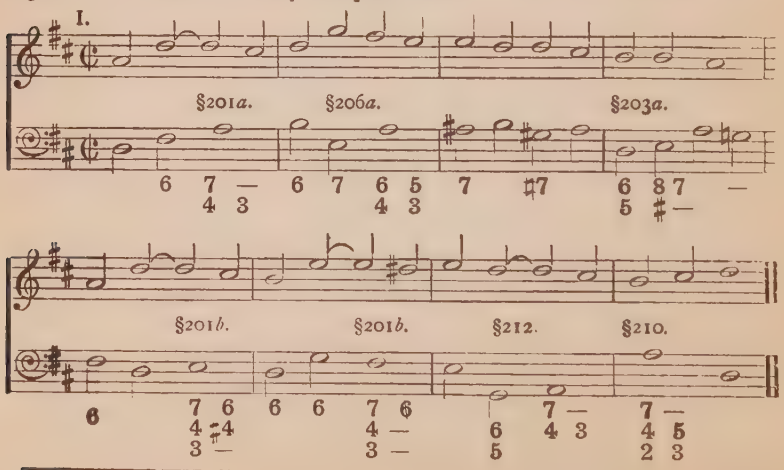
42.—In the fourth chord of question 39 which is the best note to double in five parts, and why?

43.—What form of the dominant 11th, suitable for three-part harmony, is often employed in four parts?

44.—What triads are formed by the three upper notes of the chords of the dominant 9th (major and minor), the dominant 7th, and the dominant 11th respectively?

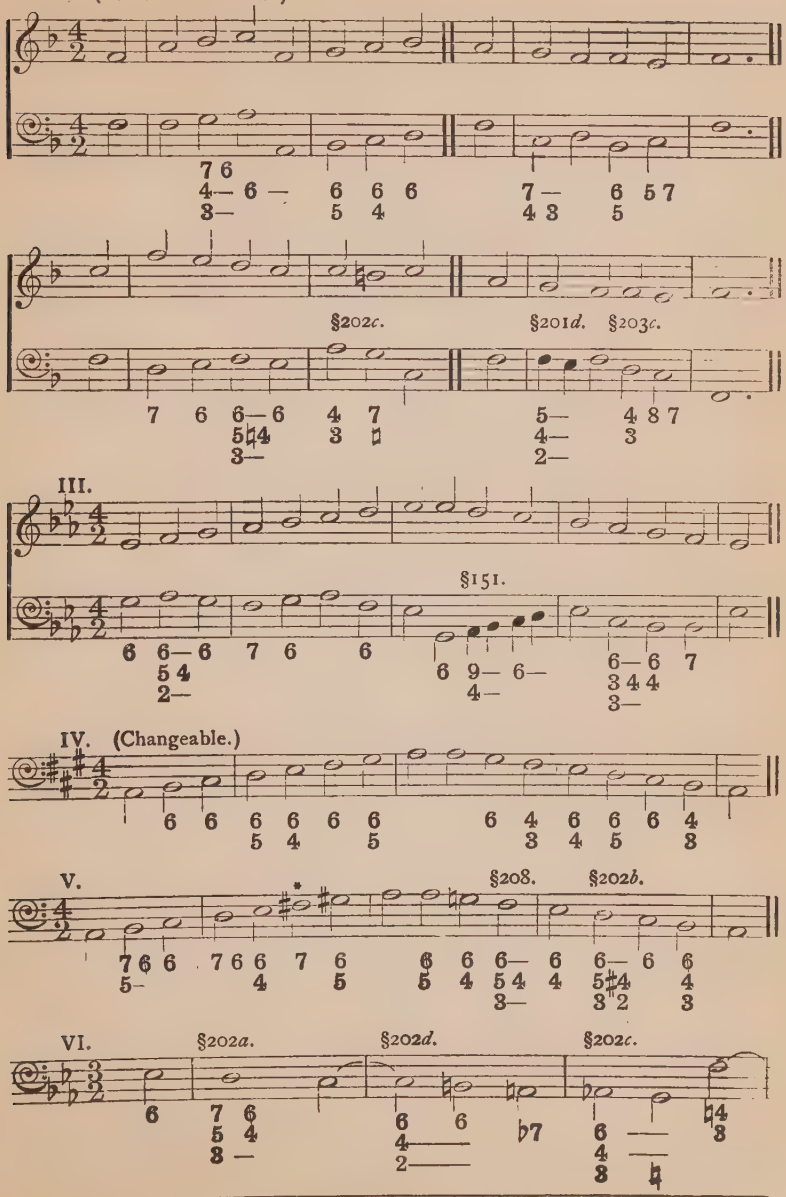
Exercises on Chapter XV.

Carefully describe and note the resolution of every 11th. The roots of all discords and inverted chords should be written on a separate staff or denoted by a capital letter.



* *Vide* §185.

II. (C.M.—"Dundee.")



* Supertonic 11th, A minor.

§202*b*.

5 — 6 ♮7 8 6 — 6 7 6 8 7
2 — 5 ♭6 5 5 ♮4 4 ♮—
4 3 3 2

VII. §203*a*.
§212.
§214*a*. §203*b*. §203*c*. §180. §203*d*.

7 6 5 6 6 6 4 6 — 8 — 9 8 7 6 4 6 7 6 6 5 7 4 3
5 3 3 4 5 — 2 4
3 3 3

VIII. §206. §206. §206.

7 6 6 6 4 6 4 6 7 6 6 6 4 6 ♮4 6
5 5 4 3 4 2 ♭5 5 4 3 4 2
♭

§206. §175*d*. §212.

♯7 6 5 6 5 ♯6 — 6 7 6 8 7 6 5
5 3 4 3 5 — 4 5 4 5 6
2 3 8 6

IX. (Double Chant. In 5 Parts.)

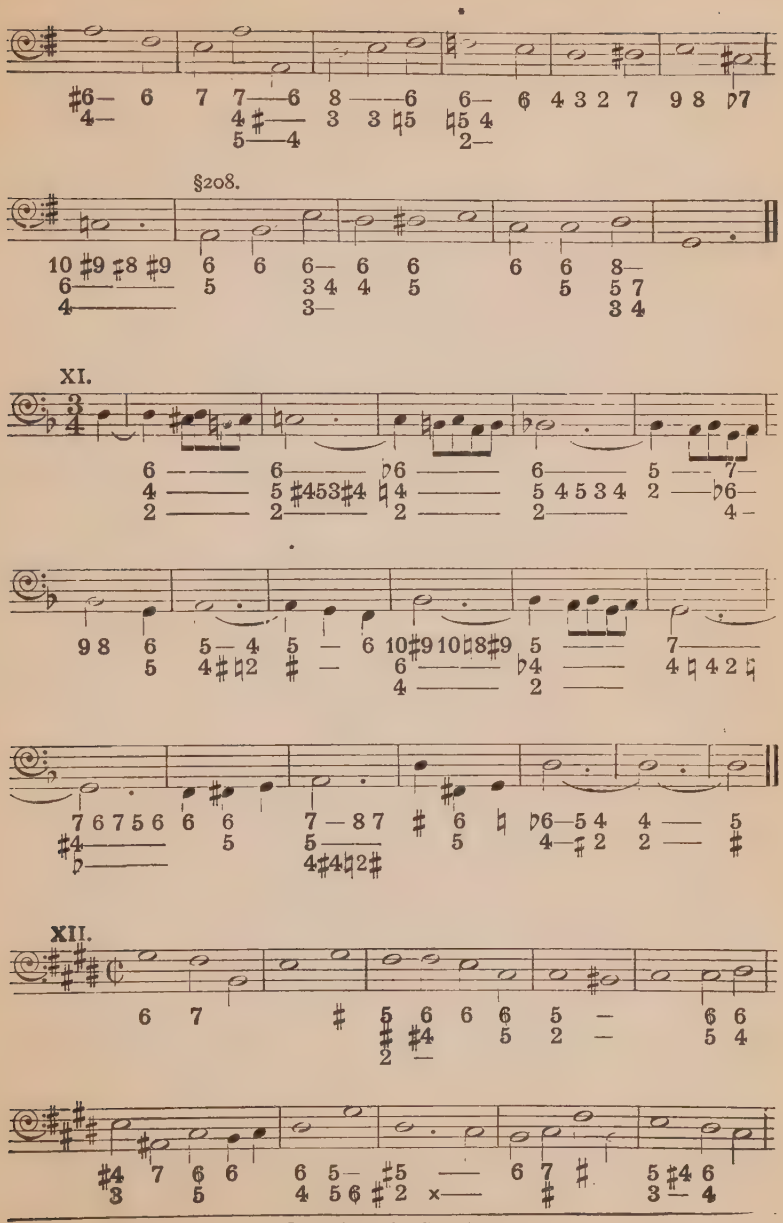
6 6 - ♮4 6 7 6 6
4 6 5 2 4
3

§133.

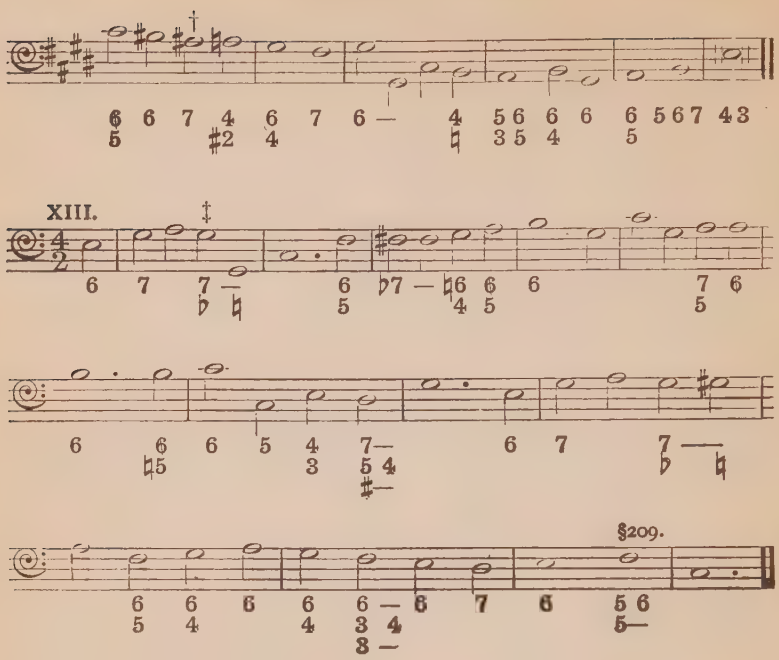
4 6 7 6 6 6 7 -
3 5 ♮ 5 5 5 4
3 —

X.

6 6 6 4 3 2 3 6 6 6 6 — 5 — 6 6 ♮7
5 5 4 5 4 — 3 — 5

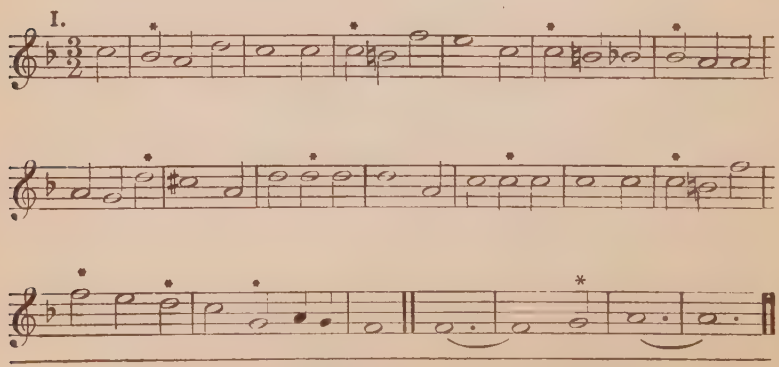


* Tonic 11th, G major.



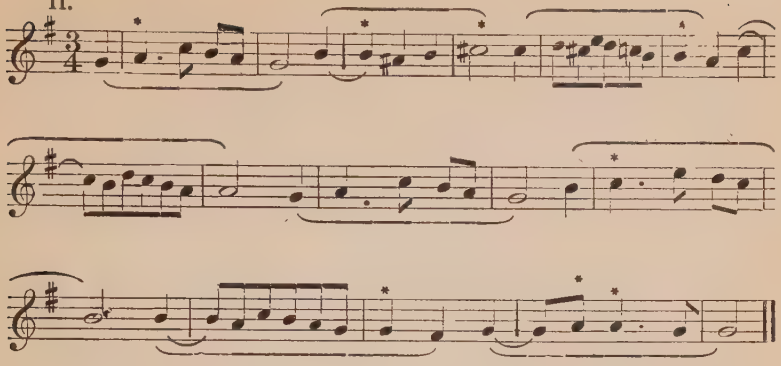
MELODIES.

The notes marked with an asterisk may be harmonized as some part of the chord of the 11th.

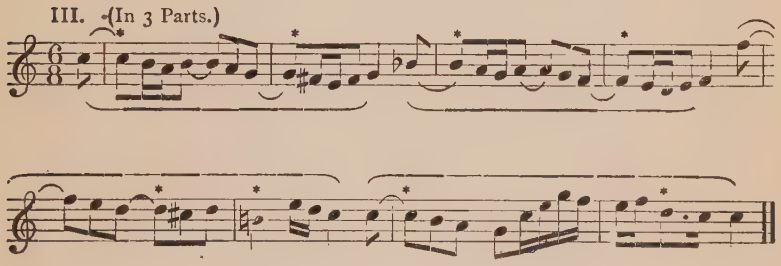


† Supertonic 11th, C♯ minor. ‡ Tonic 11th, C major.

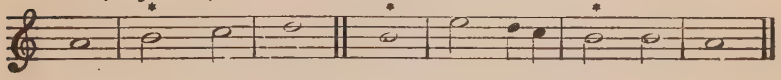
II.



III. (In 3 Parts.)



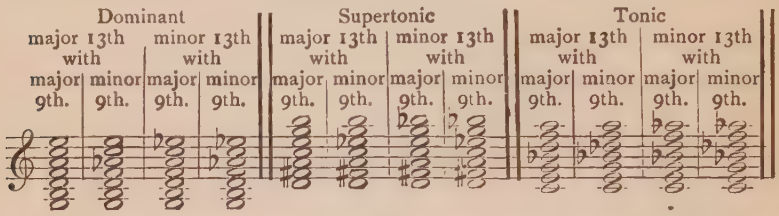
IV. (In 5 Parts.)



CHAPTER XVI.

Chords of the Thirteenth.

216.—By adding a major or a minor 3rd to the chord of the 11th with a major or a minor 9th, we obtain **the chord of the 13th,** of which there are *twelve* varieties, four on the dominant, four on the supertonic, and four on the tonic :—



If to any of the above chords we attempted to add another 3rd we should arrive at the double octave of the root. It is therefore evident that *with the chords of the 13th the series of chords formed by adding 3rds to given roots comes to an end*, and any further chords must be formed by the mixture of chords derived from different roots (Chap. XVII.), or by a particular treatment of, or selection of intervals from, chords already explained, the latter method being illustrated in Chap. XVIII.

217.—The whole of the forms given in §216 may be employed in *major* keys, but dominant major 13ths, dominant minor 13ths with major 9ths, supertonic 13ths with major 9ths, and tonic major 13ths are generally avoided in minor keys (§164).

218.—The chords shewn in §216 will become less formidable when the student realizes the facts that the *supertonic and tonic 13ths are of comparatively rare occurrence*, and that, out of the seven notes constituting the chord of the 13th, seldom more than *four*, and frequently only *three* notes are employed simultaneously. In this chapter we give the most useful and common combinations, especially for vocal music. The rarer forms, occasionally to be found in instrumental music, the student will have but little difficulty in determining for himself. A few of these are, however, given in the Appendix (*q.v.*).

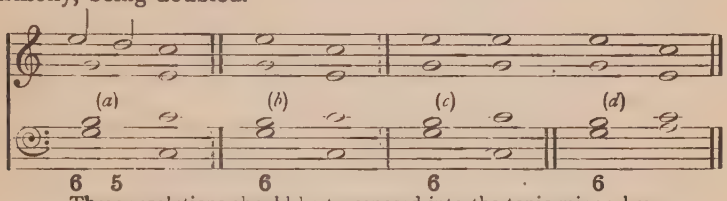
219.—The general principle governing the omission of intervals in the chord of the 13th, at least in vocal music, is that *that interval should be omitted upon which another note is about to resolve* (§§141, 165, 197). Consequently the presence of the 13th usually demands the omission of the 5th, that being the interval upon which the 13th generally resolves (§222). Similarly, if a chord of the 13th contain an 11th, the 3rd from the root must be omitted (§197); and, if a 9th be found in an inversion of the 13th, the root must be omitted (§165).

220.—The chord of the 13th differs from all other discords in that *its highest numerical interval*, the 13th, *is consonant with the root*, although dissonant with most of the other intervals.

221.—The most usual forms of the chords of the 13th are those containing

(*a*) Root, 3rd, and 13th.
(*b*) Root, 3rd, 7th, and 13th.
(*c*) Root, 7th, 11th, and 13th.
( ) 3rd, 7th, 9th, and 13th.
(*e*) 7th, 9th, 11th, and 13th.

222.—We now give, on the dominant, the first of the above forms with its most frequent methods of resolution—the root, in four-part harmony, being doubled.



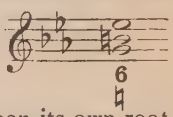
These resolutions should be transposed into the tonic minor key.

At *a* the 13th descends one degree to the 5th of the same root. At *b* the 13th descends a 3rd to the 8ve of the tonic, and at *d* to the 3rd of the submediant, the latter resolution being akin to that of the dominant 7th shewn in §94. At *c* the 13th remains stationary, becoming the 3rd of the tonic.* (*See Appendix.*)

This form admits of two inversions which the student can write out and figure for himself, remembering that the second inversion of this form is the 6th inversion of the 13th, because the 13th is the bass.

223.—The second inversion of the form of the dominant 13th given in the preceding section is identical with the mediant triad. Hence the reasons for the restrictions governing the use of that triad (§47, *b*, *c*). This simple form of the 13th, when in a major key, is practically a concord (*vide* §203), and although the 13th generally progresses as indicated in §222 it is by no means exclusively confined to the progressions there laid down.

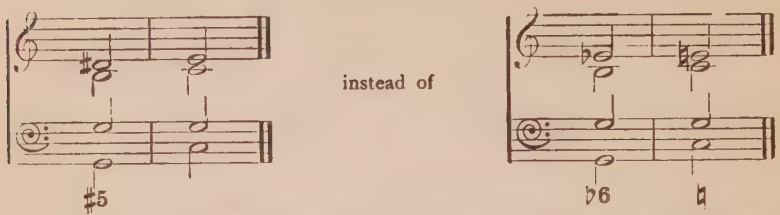
224.—By transposing the form of the dominant 13th now under discussion into the tonic minor key we find that we have the first inversion of the augmented triad on the mediant, and at once perceive that *the augmented triad is really a form of the dominant minor 13th* (§19).



225.—If, instead of resolving the dominant 13th upon its own root or upon the tonic, we resolved it upon the chromatic harmony of the tonic or supertonic, *the progression of the 13th would be practically the same, i.e.* the 13th would fall a 2nd or a 3rd (to the supertonic or tonic), or it would remain stationary. Sometimes, however, the minor 13th rises a chromatic semitone to become the 3rd of the tonic (chromatic) chord.

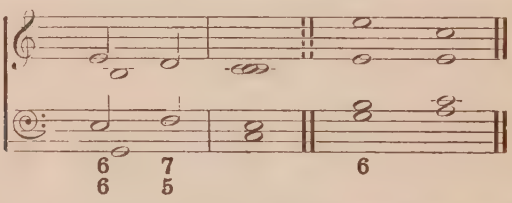
* Like chords of the 9th and of the 11th, chords of the 13th may resolve upon their own roots or upon either of the other two fundamental harmonies of the key. Tonic and supertonic 13ths, however, seldom resolve upon their own roots (§228).

226.—When the dominant minor 13th resolves upon the *major* chord of the tonic, the 13th is frequently written as an *augmented 5th* (§175), *e.g.*,



This explains the existence of *an augmented triad upon the dominant of a major scale*, a chord introduced into the eleventh and twelfth exercises at the end of Chapter VI.

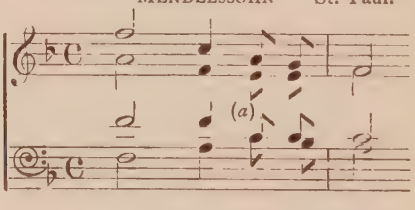
227.—*The dominant 13th may be doubled* instead of the root, provided one 13th fall to the 5th and the other rise to the 7th of the dominant, or provided one 13th move and the other remain stationary



We have now to show how far the preceding observations and examples are based upon the practice of the best composers.

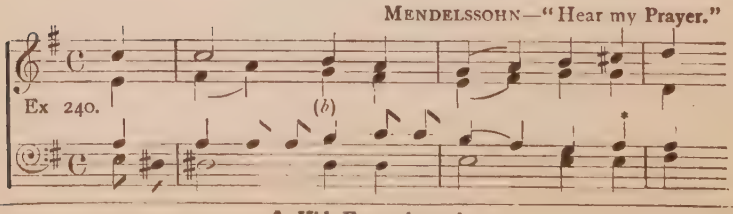
MENDELSSOHN—"St. Paul."

Ex. 239.



MENDELSSOHN—"Hear my Prayer."

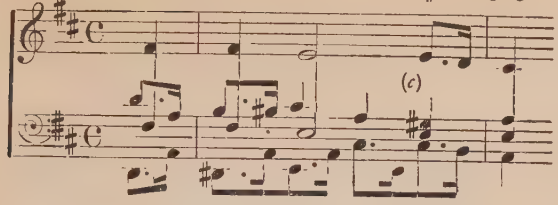
Ex 240.



* *Vide* Example 77*d*.

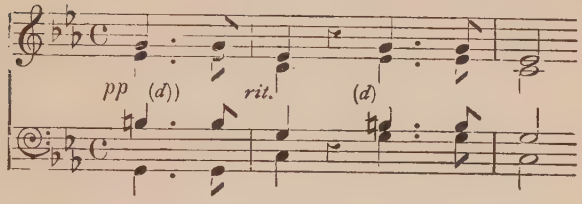
CHOPIN—"Impromptu in F♯." Op. 36.

Ex. 241.



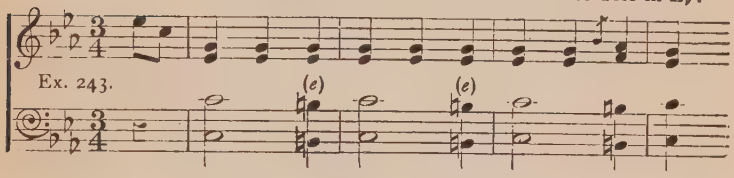
DVOŘÁK—"Stabat Mater."

Ex. 242.



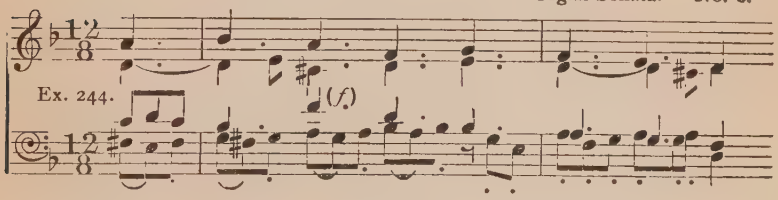
BEETHOVEN—"Posthumous Pianoforte Trio in E♭."

Ex. 243.



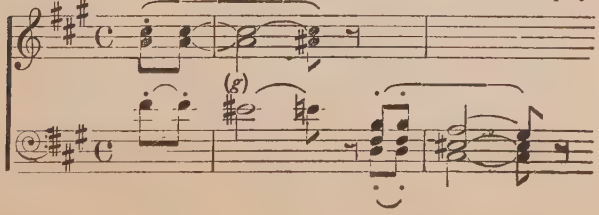
MENDELSSOHN—"Organ Sonata." No. 6.

Ex. 244.



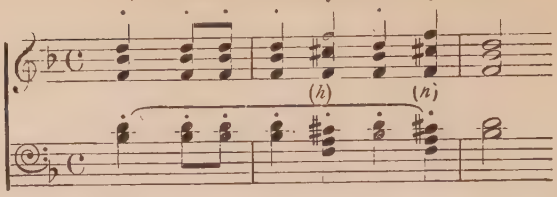
BRAHMS—"Variations." Op. 9.

Ex. 245.



MENDELSSOHN—"Pianoforte Trio in D minor." Op. 49.

Ex. 246.

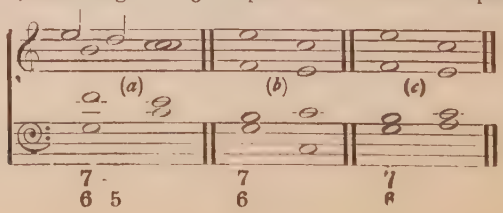


At *a*, *b*, and *c* are to be seen respectively the root position and first and sixth inversions of the dominant 13th in its simplest form, the resolution in every case being upon the dominant harmony. At *d* the 13th falls a 3rd to the tonic, but at *e* it remains stationary, the chord of resolution in both cases being that of the tonic. At *f* the 13th, F, also falls a 3rd, but here the chord of resolution is that of the submediant. At *g* the 13th, A, rises a chromatic semitone to become the 3rd of the tonic (chromatic) 7th (§225). Observe that this tonic 7th resolving on the subdominant does not constitute a modulation into B minor, because the latter chord is immediately followed by a chord (the dominant 13th) clearly maintaining the original key (§121). At *h* the dominant minor 13th in B♭ is written as C♯ instead of D♭, because followed by the chord of the tonic major (§226). An example of the first form of a dominant 13th with the 13th doubled (§227) will be found as an illustration of a $\frac{6}{4}$ on the leading note in Ex. 38.

228.—The progressions of the 13th shown thus far, hold good for all other forms of the dominant 13th. With but slight exception they also apply to the supertonic and tonic 13ths. The latter chords, however, *rarely resolve upon their own roots*, the supertonic 13th being generally followed by the harmony of the *dominant*, the tonic 13th by that of the *supertonic*. In either case, the 13th, when not remaining stationary, proceeds to the note nearest to it in the chord of resolution. Tonic and supertonic 13ths are most frequently employed for the purposes of modulation. (*Vide Appendix* & §§238, 239.)

229.—The form of the 13th containing *the root*, *3rd*, *7th*, *and 13th*, is much more beautiful and useful than the one previously described. The presence of the 7th dispenses with the doubling of the root, and greatly enhances the beauty of the chord. The 13th, being dissonant with the 7th, must now descend, the chords of resolution being generally the dominant (*a*), the tonic (*b*), or the submediant (*c*).

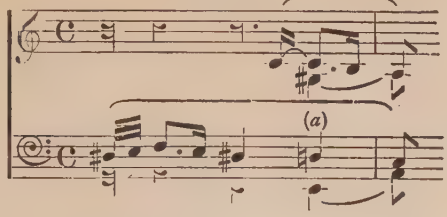
The inversions of the following resolutions the student can work out for himself, resolving the 13th upon its own root or upon the tonic.



The following illustrations show the use of this chord in actual composition.

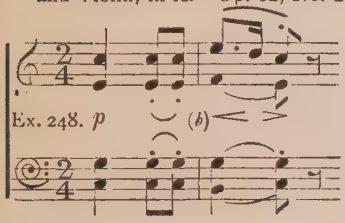
WAGNER—"Tannhäuser."

Ex. 247.



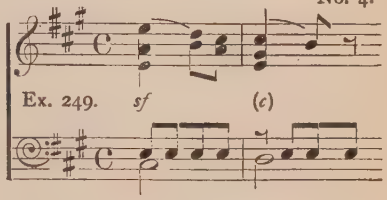
BEETHOVEN—"Sonata (Pianoforte and Violin) in A." Op. 12, No. 2.

Ex. 248.



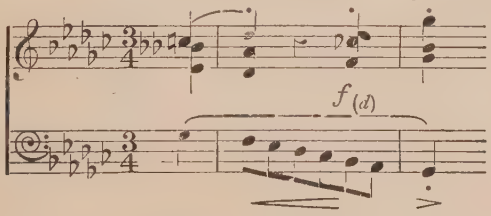
MENDELSSOHN—"Lieder ohne Worte." No. 4.

Ex. 249.



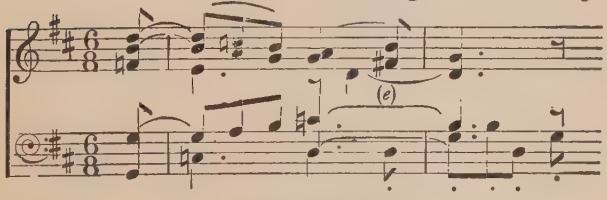
CHOPIN—"Waltz in D♭." Op. 70, No. 3.

Ex. 250.



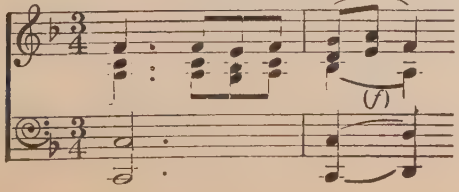
MENDELSSOHN—"Organ Sonata." No 5.

Ex. 251.



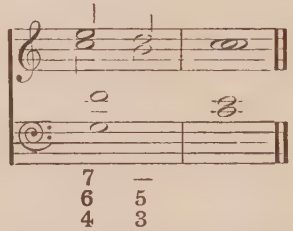
PROUT—"Magnificat." Op. 7.

Ex. 252.



The foregoing examples need but little explanation. At *a* the dominant minor 13th in its root position, and at *b*, *c*, and *d* the dominant major 13th in the first, third, and sixth inversions (second form) is resolved upon its own root. At *e* the second form of the dominant 13th in G resolves upon the tonic, the 13th falling a 3rd, and at *f* the dominant 13th in F proceeds in like manner, but the chord of resolution is that of the submediant.

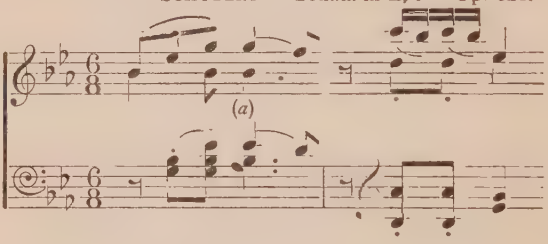
230.—The third form of the dominant 13th—*root*, 7*th*, 11*th*, *and* 13*th*—is, as regards its treatment, practically the same as the preceding, the 11th generally resolving upon the 3rd at the same time as the 13th. We give the root position, leaving the student to work out the inversions :—



The following examples contain two illustrations of the use of this form of the dominant 13th, that at *a* having the 7th in the bass, and that at *b* having the 13th in the lowest part.

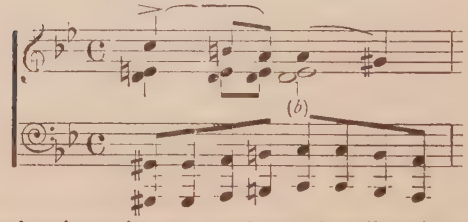
SCHUBERT—"Sonata in E♭." Op. 122.

Ex. 253.



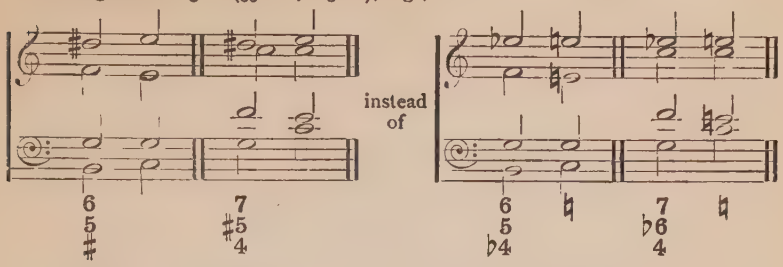
F. HILLER—"Study in B♭." Op. 15, No. 24.

Ex. 254.



231.—The last inversions of the forms described in §§229 & 230 are harsh in a *major* key, it being a general rule that *major* 13*ths* ***should preferably be placed in the upper part, or,*** at any rate, *above the* 7*th*.

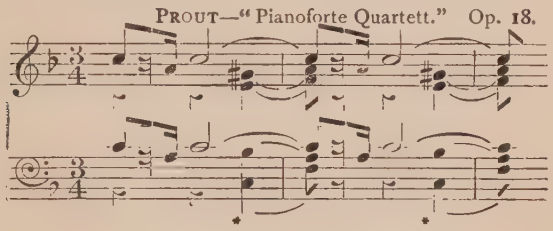
232.—In both the preceding forms the *minor* 13*th* is often written as an *augmented* 5*th* (§§226, 236*d*), *e.g.*,



We give an illustration of each of the above examples.

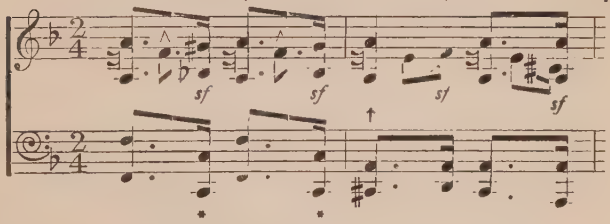
PROUT—"Pianoforte Quartett." Op. 18.

Ex. 255.

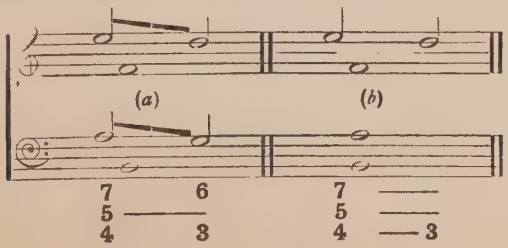


SCHUMANN—"Sonata (Violin and Pianoforte) in A minor." Op. 105.

Ex. 256.

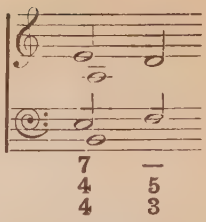


233.—The fourth form of the 13th, containing the 3*rd*, 7*th*, 9*th*, and 13*th*, requires care when the 9th is a perfect 5th below the 13th and resolves with the latter, or consecutive 5ths may be produced (*a*) Generally speaking, however, the 13th resolves first (*b*).

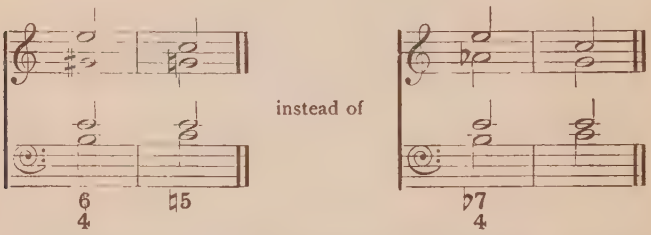


† *Vide* page 203.

234.—Sometimes, in this fourth form of the 13th, the 7th is omitted and the 13th doubled (§227), *e.g.*, but, without the 7th, the chord of the 13th is more useful in three than in four part harmony.



235.—As in the case of chords of the minor 9th (§§175*d*, 177*e*), the interval of the minor 9th, when used chromatically in a major key, is frequently written as an augmented 8ve. This is nearly always the case when the form of the dominant 13th last explained resolves upon the tonic chord, *e.g.*,

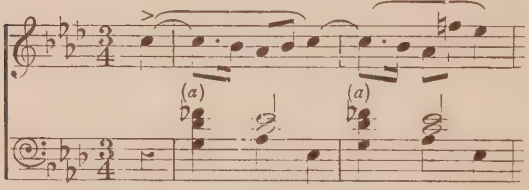


In the first of the above examples the 13th has the appearance of a *major chord upon the mediant*, and, thus written, it is sometimes used cadentially (§243*c*).

We now give some illustrations of the preceding sections.

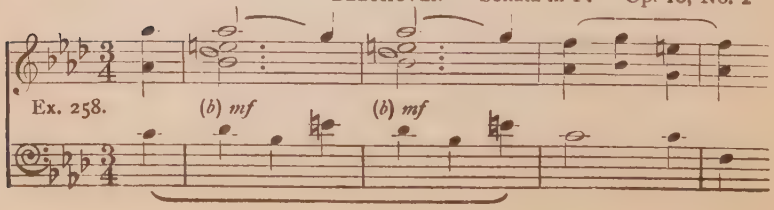
CHOPIN—"Mazurka in A♭." Op. 17, No. 3.

Ex. 257.



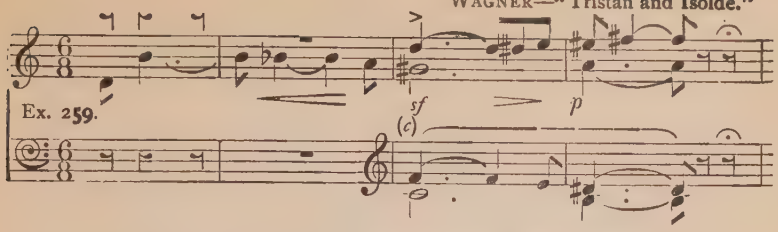
BEETHOVEN—"Sonata in F." Op. 10, No. 2

Ex. 258.



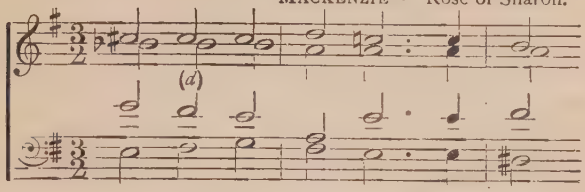
WAGNER—"Tristan and Isolde."

Ex. 259.



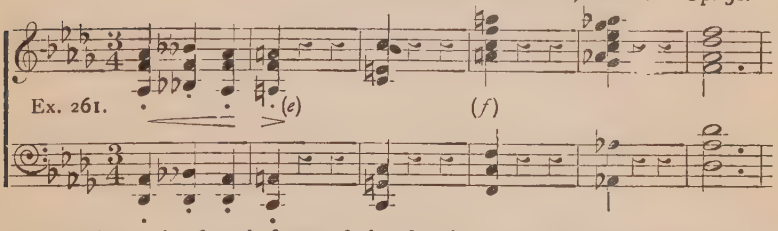
MACKENZIE—"Rose of Sharon."

Ex. 260.



CHOPIN—"Scherzo in B♭ minor." Op. 31.

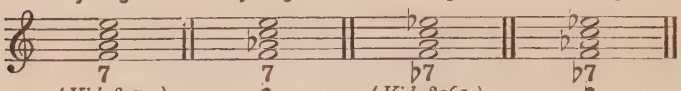
Ex. 261.



At *a* we have the fourth form of the dominant 13th. Here the 3rd is in the bass (*i.e.*, the first inversion), the 13th being major and the 9th minor, the 13th resolving before the remainder of the chord. At *b* (third inversion) the 9th and 13th are both minor, the 13th again resolving first, the 9th (D♭) being doubled and ornamentally resolved in the lower part. At *c* we have a beautiful example of the 13th in the bass remaining stationary until the 9th and 7th of the root E have resolved. Finally the 13th resolves upon the supertonic 7th in the key of A minor. The D♯ and E♯ in the melody are chromatic passing notes (§124). At *d* we have a chord (which the connection shows to be the supertonic 13th in G major) with the 3rd, 9th, and 13th doubled, resolving upon a supertonic 9th. At *e* the dominant 13th in D♭ (3rd—C, 9th—B♭♭, 13th—F) is written as a major chord on the mediant, and quitted as a tonic triad in the key of F. At *f* the tonic triad in the key of F is quitted as the dominant 13th in D♭. This is the first example of modulation by means of the chord of the 13th to which we have directed the student's attention, but Ex. 256 contains a major chord upon the mediant of F quitted as a dominant triad in D minor. An example of dominant 3rd, 7th, 9th, and minor 13th (written as augmented 5th), with the 7th in the bass, is to be found in the penultimate chord of Ex. 195.

236.—Our next form of the chord of the 13th is that containing the *7th, major or minor 9th, perfect 11 th, and major or minor 13th.* The 9th and 13th having alternative forms, the chord exists in four different varieties, viz. :—

(*a*) Major 9th and major 13th.	(*b*) Minor 9th and major 13th.	(*c*) Major 9th and minor 13th.	(*d*) Minor 9th and minor 13th.



(*Vide* §274.) (*Vide* §261.)

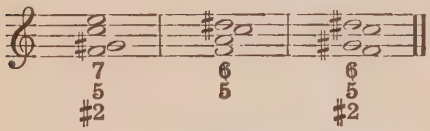
Concerning these chords we would remark that

(*a*) *The 13th is the only dissonance with the primary bass*, therefore all the notes, with the exception of the 13th, are *free* in their progression (§203).

(*b*) Only the *last* form is possible in a *minor* key (with the exception of the particular case stated in §174).

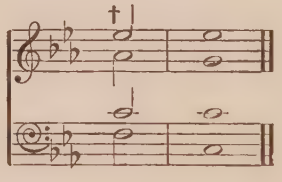
(*c*) The first and last forms have the 9th a perfect 5th *below* the 13th. To avoid consecutives in the resolution (§233), the 13th, or the 13th and 11th, should resolve *before* the 9th, or the 9th should be placed *above* the 13th. There will be no danger of consecutives if the chord resolve directly upon the tonic.

(*d*) The minor 9ths and 13ths are sometimes written as *augmented 8ves and 5ths, e.g.*,



instead of *b*, *c*, and *d* as given above.*

(*e*) The primary bass (§70) sometimes *falls to the tonic*, especially at the cadence (§243*d*), *e.g.*,



Observe that this chord is identical in appearance with the second inversion of the dominant 11th of the relative major.

The following are a few of the many illustrations which may be given of the last form of the chord of the 13th.

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* Observe that this is an exceptional case of false notation, because in the resolution of the chord of the 13th the minor 9th usually descends a diatonic semitone instead of ascending a chromatic semitone as in §§175, 177.

† Dr. Creyghton, of Wells (1639-1736), so frequently employed this form of the 13th as the ante penultimate chord of the cadences in his church music, that the chord is often termed a "Creyghtonian" 7th.

BACH—"Passion"—St. Matthew.

Ex. 262.

(a)

MACKENZIE—"Rose of Sharon."

Ex. 263.

(b)

SCHUMANN—"Kreisleriana." Op. 16, No. 2.

Ex. 264.

(c)

MOSCHELES—"Study in E minor." Op. 95, No. 8.

Ex. 265

sf *p* (d) *sf*

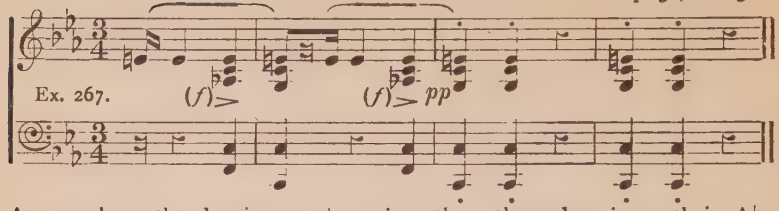
MENDELSSOHN—"Quartett in A minor." Op. 13.

Ex. 266.

(e) *p* *pp*

CHOPIN—"Mazurka in C minor." Op. 56, No. 3.

Ex. 267.

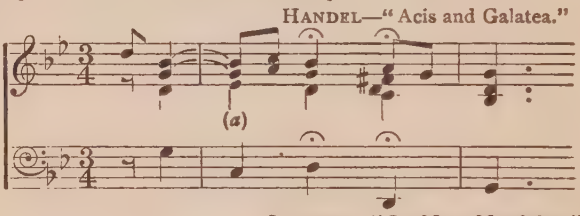


At *a* we have the dominant 7th, major 9th, 11th, and major 13th in A♭, the 9th leaping a 5th to avoid consecutives. At *b* the same chord, only in the key of G, resolves upon the supertonic major 9th. Ex. 264*d* shows the dominant 7th, minor 9th, 11th, and major 13th, while at *c*, the 9th is major and the 13th minor, and at *e* both 9th (F) and 13th (C) are minor. The last three examples of dominant 13ths resolve on their own roots. At *f* the dominant major 13th with a minor 9th is used cadentially, the primary bass (the 7th from the root, G) falling a 4th to the tonic (§§180*b*, 209).

237.—Like all other fundamental discords, that of the 13th may be resolved *ornamentally*, but, owing to the desirability of keeping the major 13th in the *upper* part or *above the 7th* (§231), the former interval is but rarely transferred to another part before resolution. We give two examples of ornamental resolution, in both of which the 13th proceeds to another harmony note before going to its note of resolution (*a*, *b*) At *c* the 13th is transferred from the soprano to the tenor.

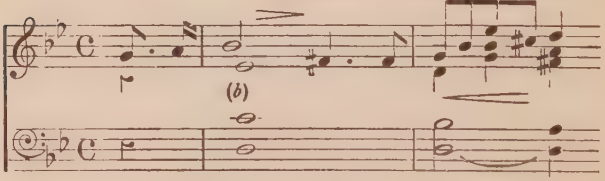
HANDEL—"Acis and Galatea."

Ex. 268.



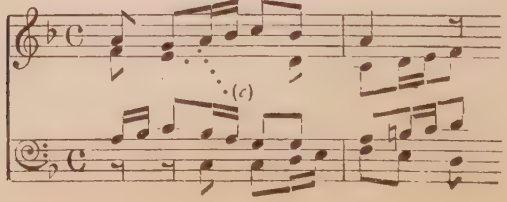
STAINER—"St. Mary Magdalen."

Ex. 269.



HANDEL—"Samson."

Ex. 270.



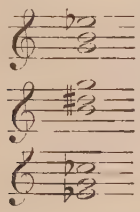
238.—The chord of the 13th is rendered available for the purposes of modulation

(*a*) By being approached as a dominant 13th and quitted as a tonic or supertonic 13th, or *vice versâ.*

(*b*) By being *changed enharmonically* (§239), and then quitted as a dominant, supertonic, or tonic 13th in the new key.

(*c*) By approaching the 7th, minor 9th, perfect 11th, and minor 13th of the dominant as a dominant 13th, and quitting it as the third inversion of the dominant 11th, and *vice versâ;* or by approaching the 7th, major 9th, 11th and minor 13th of the dominant as a dominant 13th, and quitting it as a dominant, supertonic, or tonic 7th, or *vice versâ.*

239.—*By enharmonic change* of the simple form of the dominant minor 13th given in §222, *every note in the chord can in turn become the root, e.g.,*



= Dominant minor 13th. Root G. Key C.

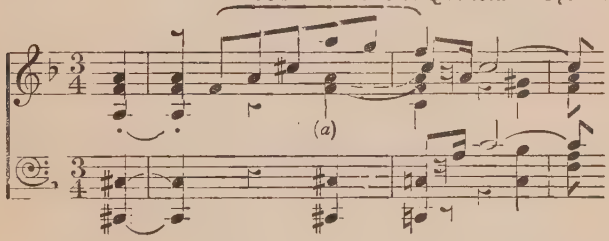
= Dominant minor 13th. Root B. Key E.

= Dominant minor 13th. Root E♭. Key A♭.

The following illustrations will give the student some idea of the capabilities of the chord of the dominant 13th as a means of modulation.

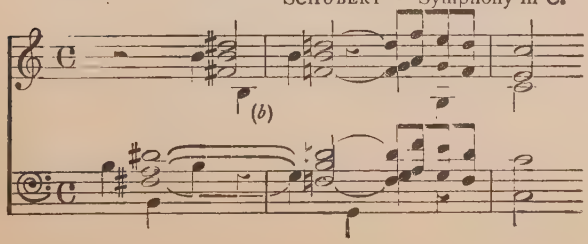
PROUT—"Pianoforte Quartett." Op. 18.

Ex. 271.



SCHUBERT—"Symphony in C."

Ex. 272.



GRIEG—"Sonata (Pianoforte and Violin) in C minor." Op. 45.

Ex. 273.

(c)

BACH—"Fugue in G♯ minor." (Wohltemperirtes Clavier. Book I.)

Ex. 274.

(d)

BERLIOZ—"Faust."

Ex. 275.

(e)

BEETHOVEN—"Sonata in D." Op. 10, No. 3.

Ex. 276

p ff (f) sf

At *a* the chord proved by the connection (to which the student should, if possible, refer) to be the dominant 13th in D minor, is quitted as the tonic 13th (F, A, C♯ = D♭) in the key of F, the G in the melody being regarded as a passing note (§123). At *b* a chord proved by the connection to be the dominant 7th in E minor is quitted as the supertonic 13th (3rd, 5th, 9th = augmented 8ve, and 13th) in the key

of C. At *c* the 7th, minor 9th, 11th, and minor 13th in C minor is quitted as the dominant 11th in E♭ major. At *d* the supertonic 7th in E is quitted as the 7th, *major* 9th, 11th, and minor 13th of the dominant in C♯ minor. This gives us another instance of the use of an *ascending* major 9th in a minor key (§174). At *e* the dominant chord of C♯ minor is quitted as the dominant 13th (3rd, *minor* 9th, and major 13th, §235) in E major. A similar modulation (in this case from E minor to G major) is to be found in the fourth bar of the Overture to Handel's Messiah. Ex. 276 shows the key of B♭ approached from that of D by regarding the triad of B♭ as the minor 9th, 11th, and minor 13th of A, the dominant of D. These examples only hint at the possibilities of modulation by means of the chord of the 13th, but want of space forbids further quotations.

240.—In three-part harmony the best combinations of the intervals of the chord of the 13th are

(*a*)—Root, 3rd, and 13th.

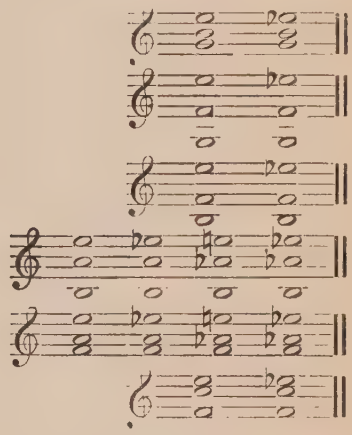
(*b*)—Root, 7th, and 13th.

(*c*)—3rd, 7th, and 13th.

(*d*)—3rd, 9th, and 13th.

(*e*)—7th, 9th, and 13th.

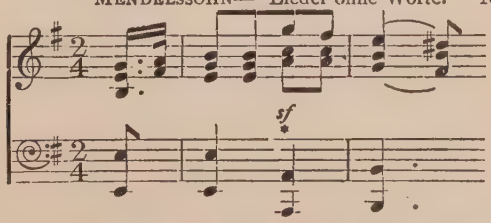
(*f*)—7th, 11th, and 13th.



The last two forms (with the 7th doubled) are frequently used in four-part harmony. We give an example of the former :—

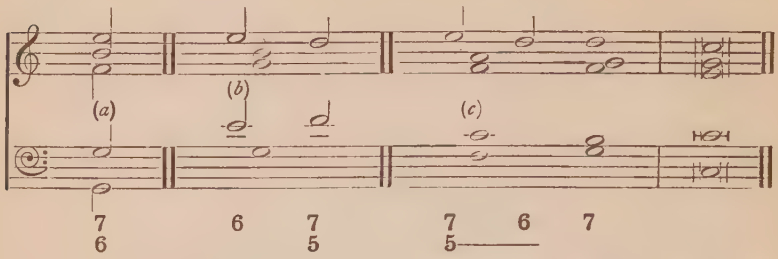
MENDELSSOHN—"Lieder ohne Worte." No. 27.

Ex. 277.



241.—In five-part harmony the fuller forms of the 13th are preferable to those containing only three notes. When present, *the root is the best to double* (*a*); but, in the dominant 13th, we may double the 13th (*b*), provided one 13th proceeds to the 5th and the other to the 7th of the

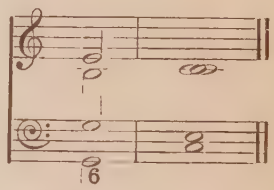
dominant, or we may double the 7th (*c*), provided that ultimately one 7th ascends and the other descends one degree. In tonic or supertonic 13ths we may double the root or any note which has not a compulsory or chromatic progression.



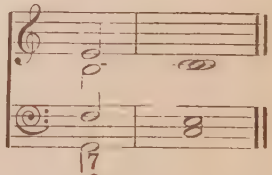
242.—In harmonizing a melody, the dominant 13th may frequently be used when the melody proceeds from *mediant to supertonic* (§222, *a*) or from *mediant to tonic* (§222, *b*), the latter especially at the cadence. *A repeated mediant* often implies a dominant 13th (§222, *c*), while *a sharpened supertonic followed by the mediant* generally implies a dominant minor 13th written as an augmented triad on the dominant (§226).

243.—Unlike the dominant 9ths and 11ths (§§191, 209), *the dominant 13th is very frequently used instead of the dominant 7th to form the authentic cadence.* We give a list of its most common forms for cadential purposes :—

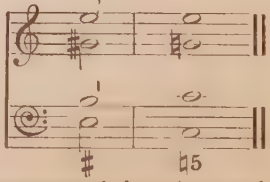
(*a*)—Root, 3rd, and 13th.



(*b*)—Root, 3rd, 7th, and 13th.

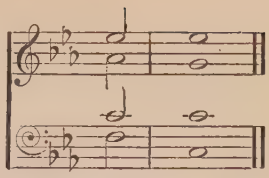


(*c*)—3rd, *minor* 9th, and 13th,—the minor 9th being generally written as an augmented octave of the root, and the whole chord appearing as a major chord on the mediant (§235).



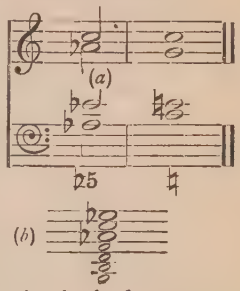
The cadence at *c* is more common in *instrumental* than in vocal music.

(*d*)—7th, 9th, 11th, and 13th.



Here the 7th in the bass leaps to the tonic, as in similar cases in the chord of the dominant 7th (§105*d*), 9th (§180*b*), and 11th (§209). This form is more suitable for a middle than for a final cadence (*vide* §234*e*).

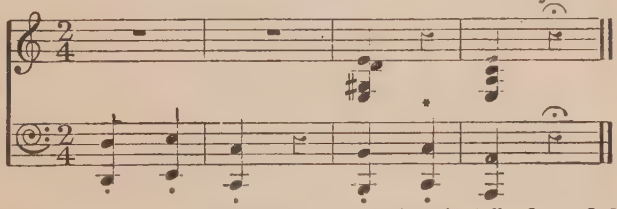
Lastly, we often find in the course of a phrase of vocal music, or at the close of an instrumental movement, a cadence formed by the juxtaposition of what at first sight appears to be the *submediant chord of the minor key used chromatically* in the major key (*a*). But regarding the first chord as formed from the minor 9th, perfect 11th, and minor 13th of the dominant (*b*), the cadence is a variety of the authentic cadence, the roots of the penultimate and final chords being dominant and tonic respectively. Hence the submediant triad may be looked upon as the three upper notes of the chord of the dominant 13th.



The following examples of the employment of the dominant 13th at the cadence will fitly conclude our illustrations of this Chapter. The first quotation shows the second form of the 13th with that interval in the bass, while the second and third extracts illustrate the cadential use of the submediant chord, or, to put it more correctly, the major 9th, 11th, and major 13th of the dominant and the minor 9th, 11th, and minor 13th of the dominant used cadentially.

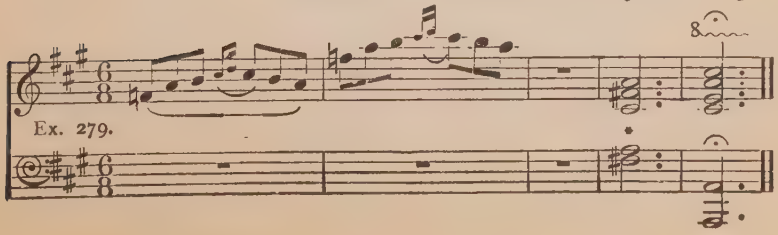
MACKENZIE—"Jason."

Ex. 278.



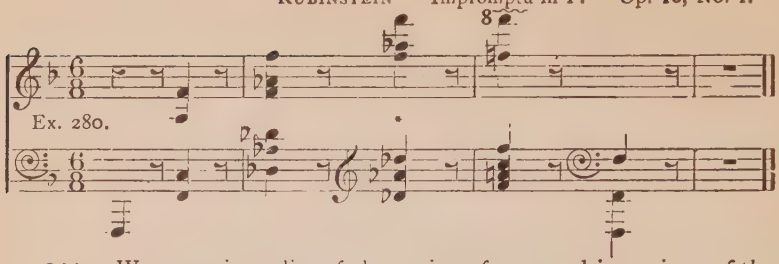
RUBINSTEIN—"Novellette in A." Op. 108, No. 3.

Ex. 279.



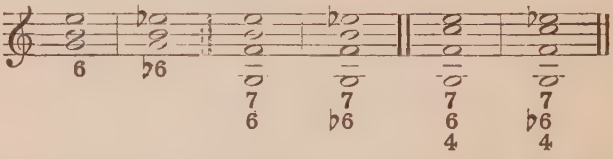
RUBINSTEIN—"Impromptu in F." Op. 16, No. 1.

Ex. 280.

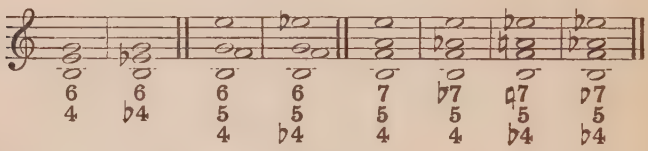


244.—We now give a list of the various forms and inversions of the dominant 13th explained in this Chapter :—

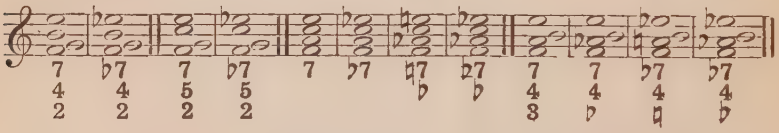
Root Position.



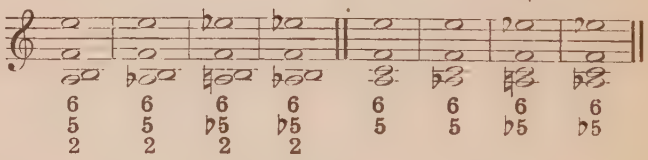
1st Inversion.



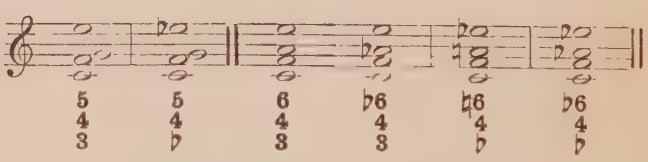
3rd Inversion.



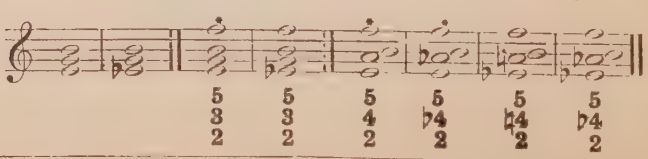
4th Inversion.



5th Inversion.



6th Inversion.



* Rare (*vide* §231).

Questions on Chapter XVI.

1.—Describe the formation of chords of the 13th.

2.—How many forms are there of this chord, upon what roots are they found, and how many forms are found over each root?

3.—Of what series of chords is the 13th the last, and for what reason?

4.—How are fundamental discords other than 7ths, 9ths, 11ths, or 13ths formed?

5.—What forms of the 13th are admissible in major keys, and what are forbidden in minor?

6.—Which of the fundamental 13ths are of somewhat rare occurrence?

7.—Of how many notes does the complete chord of the 13th consist, and what is the minimum number of these used in four-part harmony?

8.—What intervals from the root are generally omitted in chords of the 13th, and for what reason?

9.—In what respect does the 13th differ from all other fundamental discords?

10.—Give a list of the most usual combinations of intervals to be found in chords of the 13th.

11.—Which of these combinations is the most beautiful and useful?

12.—Upon what harmonies does the dominant 13th generally resolve?

13.—Upon what roots do tonic and supertonic 13ths generally resolve?

14.—How does the 13th in a dominant 13th usually progress?

15.—What triad is formed by the first form of the dominant 13th?

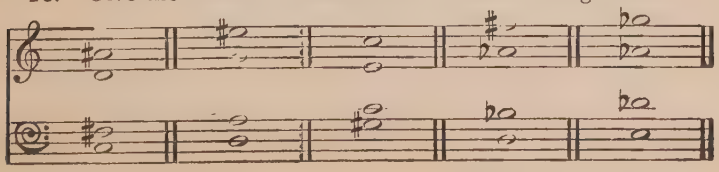
16.—Describe the real origin of augmented triads on the mediant of a minor key and the dominant of a major.

17.—What is the advantage gained by writing minor 13ths as augmented 5ths, and minor 9ths as augmented 8ves?

18.—When may the dominant 13th be doubled?

19.—Write out and figure the root position and inversions of that form of the dominant 13th which contains the root and the 11th.

20.—Give the roots and resolutions of the following chords:—



21.—What form of the 13th is more useful in three than in four-part harmony?

22.—What interval in this form must be doubled in four parts?

23.—When are consecutive 5ths likely to occur in the chord of the 13th, and how may they be avoided?

24.—What form of the dominant 13th resembles a major chord on the mediant, and what particular use is made of it?

25.—What form of the 13th resembles the chord of the dominant 7th?

26.—When are the 11ths and 9ths in the chord of the 13th free in their progression?

27.—Write some forms of the third inversion of a dominant 13th which cannot be used in a minor key.

28.—Write some forms of the same chord which are liable to produce consecutive 5ths.

29.—When may the 7th in the dominant 13th fall to the tonic?

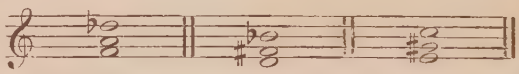
30.—What form of the dominant 13th resembles one of the forms of the dominant 11th?

31.—What kind of resolution is common to all fundamental discords and discords of suspension?

32.—How can the chords of the 13th be utilized for the purposes of modulation?

33.—What notes in a chord of the 13th can be changed enharmonically?

34.—Change the following chords enharmonically, so that each note may in turn become the root, and in each case give the key and the resolution:—



35.—Give a list of the forms of the 13th most suitable for three-part harmony.

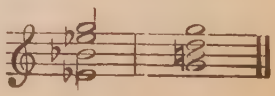
36.—State the best doublings for the chord of the dominant 13th in five parts.

37.—When is the use of a dominant 13th indicated in a melodic progression?

38.—What dominant discords are freely and what are sparingly employed at the cadence?

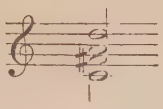
39.—What cadential use of the dominant 13th is more suitable for instrumental than for vocal music, and what form is more suited to a middle than to a final cadence?

40.—Prove the following to be an authentic cadence:—

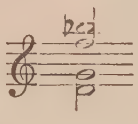


41.—Give a list of all the forms of the dominant 13th with which you may be familiar.

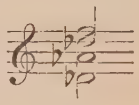
42.—Resolve this chord :— (*a*) as a dominant 7th, (*b*) as a supertonic 7th, (*c*) as a tonic 7th, and (*d*) as a dominant 13th ; in each case giving the figuring, root, key, and inversion.



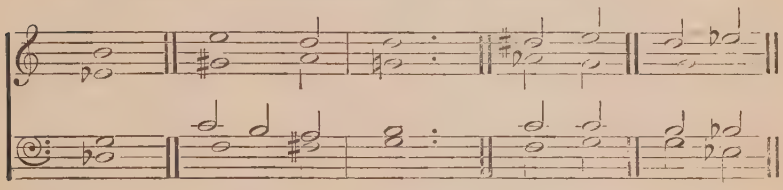
43.—Resolve this chord :— (*a*) as a dominant 11th ; and (*b*) as a dominant 13th ; in each case giving the root, key, etc.



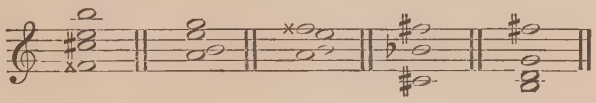
44.—Treat this chord cadentially as the three upper notes of a dominant 13th.



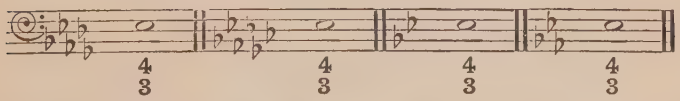
45.—Correct the false notation in the following :—



46.—Describe and resolve the following chords, giving the key, root, and figuring :—



47.—Give the derivation and resolution of the following :—



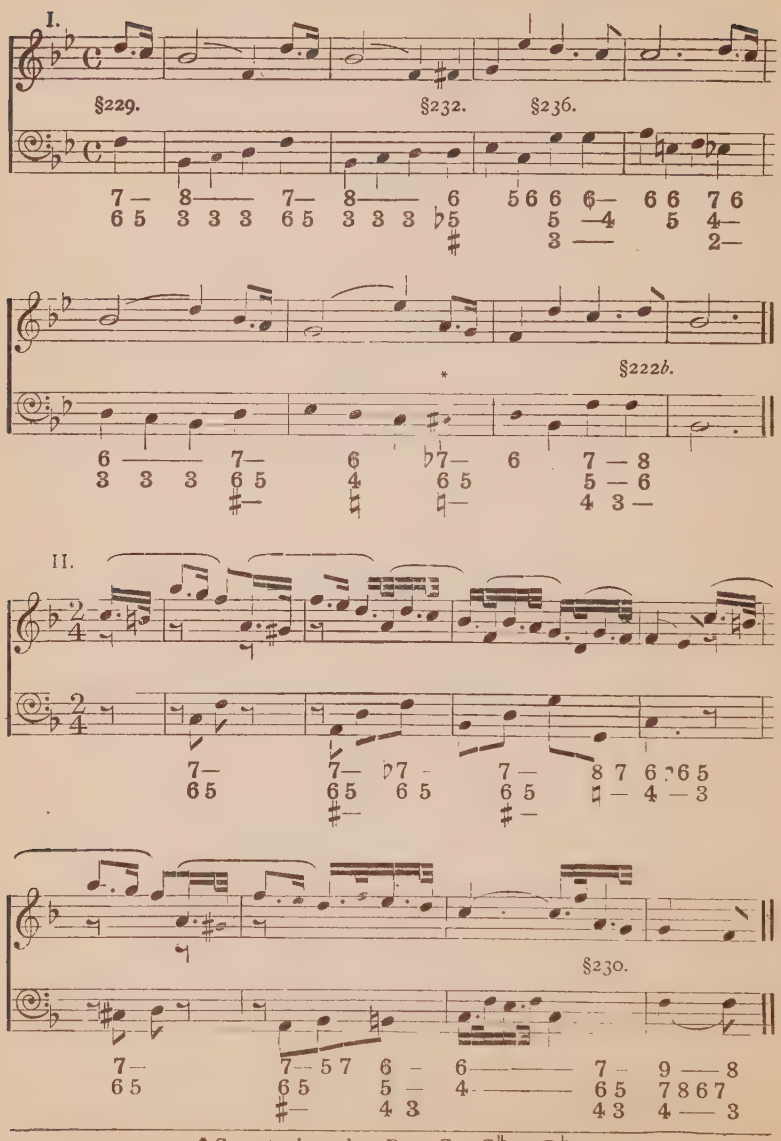
48.—By means of enharmonic change in the chord of the dominant 13th, modulate from B♭ minor to D minor, and from G minor to B minor.

49 —By means of the same chord modulate from any minor key to its relative major.

50.—State the derivation of the triads on the supertonic, mediant, subdominant, submediant, and leading note in a major and also in a minor key.

Exercises on Chapter XVI.

(Roots to be indicated as in previous Chapters.)



* Supertonic 13th. Root C. C♯ = D♭.

III.

§236.

5 6 6 7 4 6 6 ♮4 6 7 8 7
2 ♮ 2 6 5

IV.

8 — 6 6 7 6 - 6 6 4 6 7 6 6 6
3 3 3 5 ♯ 5 5 - 5 4 2 ♯4 — 4
4 3 2 — 3

V. (Ch. XVIII.) §233.

8 — 6 6 7 6 — ♯5 — 6 7 6 6 4
3 3 3 5 5 — 3 — 4 — 3
4 3 2 — 3 —

VI. (C.M. "Dundee.")

§236. §227. §236.

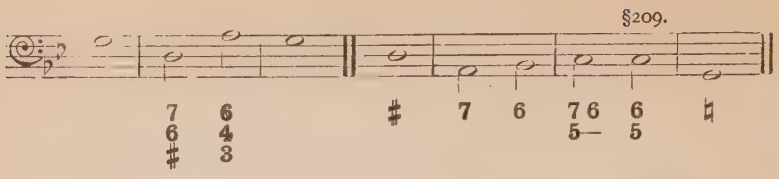
6 6 — 6 7 6 5 6 7 7
4 5 6 7 6
3

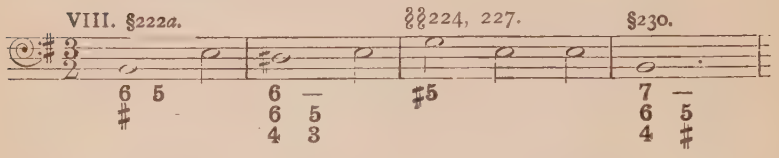
§236. §243*e*.

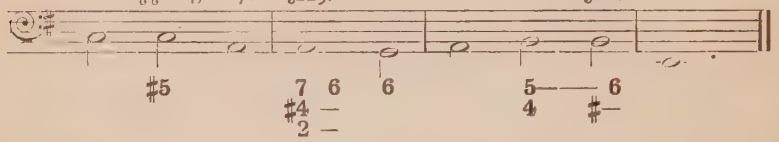
6 7 7 8 7 8 7 6 7 7 ♭5 ♮
♮ — ♮ — 5 —

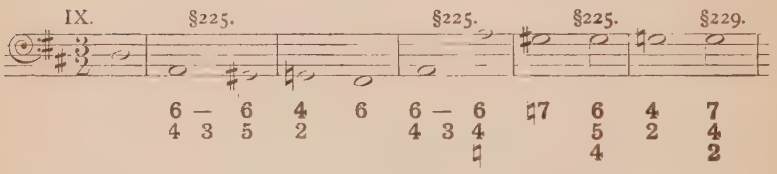
VII. (Double Chant—"Per recte et retro"—in 5 Parts.)

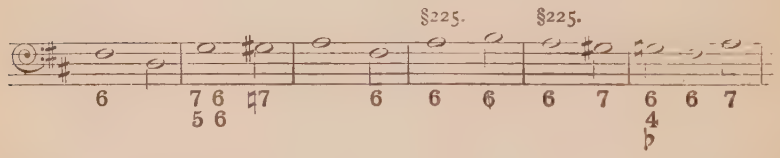
6 7 ♮ 6 6 7 6 7 ♯
4 6 5 5 —
3 ♯

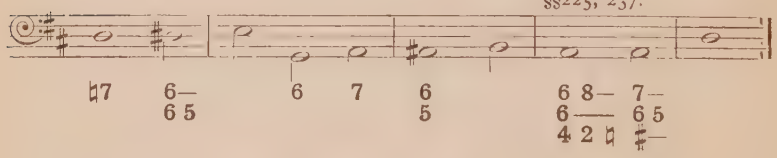


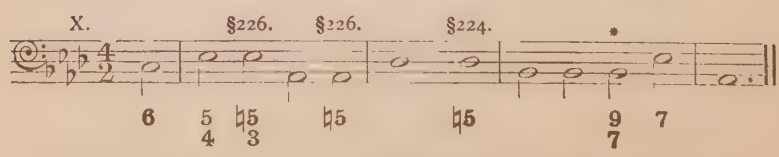




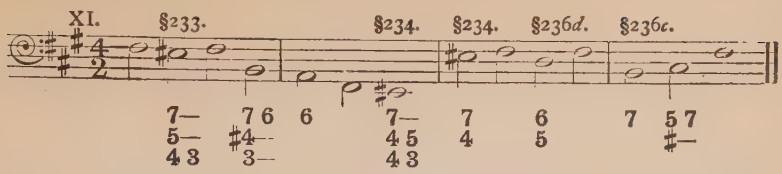


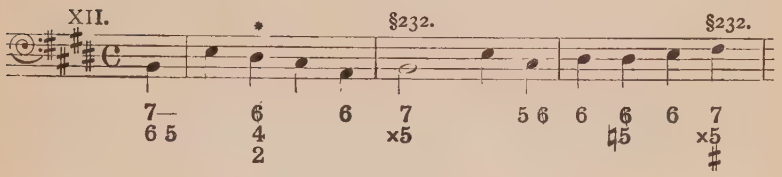


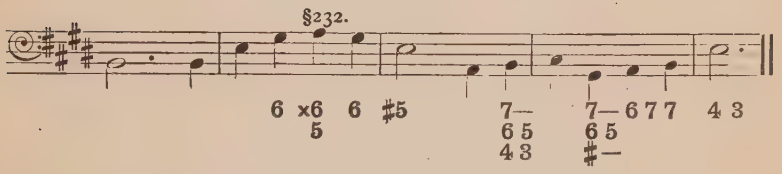


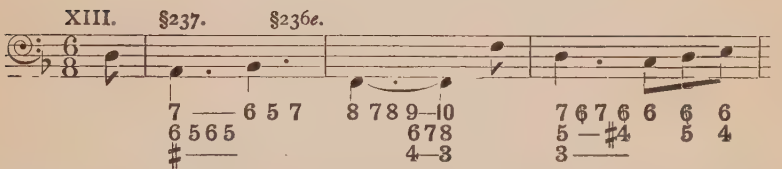


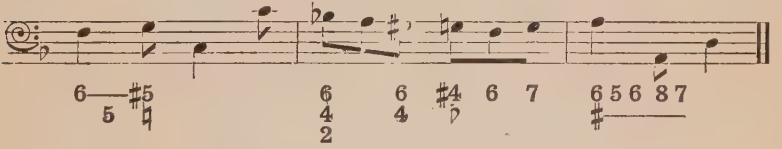
* 5th, 7th, 11th and 13th of dominant. (*Vide* §282.)





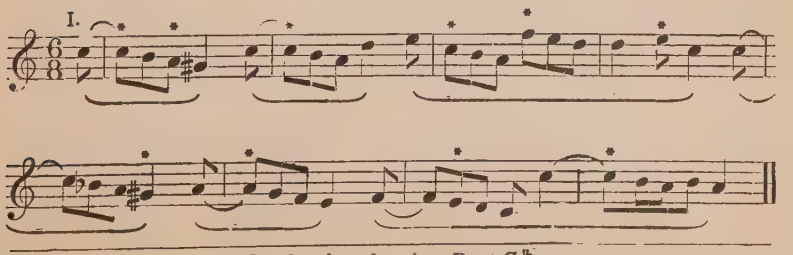




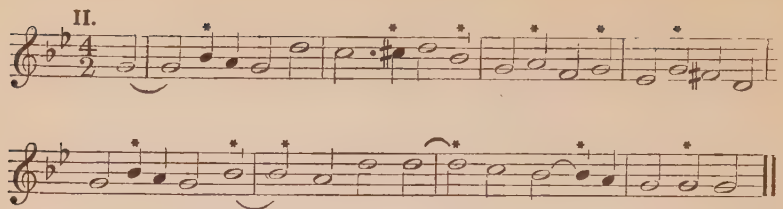


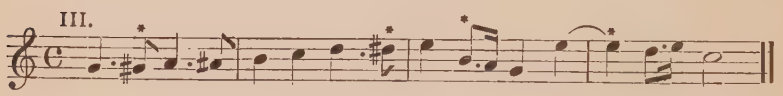
Melodies.

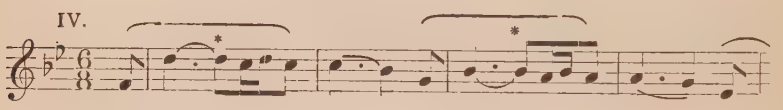
Notes marked * may be harmonized as parts of chords of the 13th.

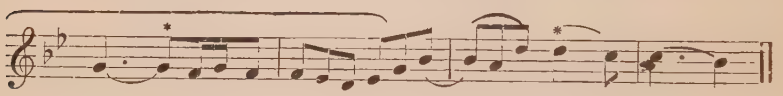


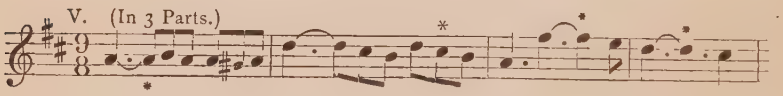
* 3rd, 5th and 13th. Root G♯.

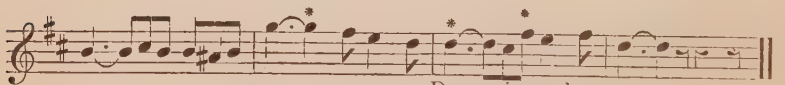

II.

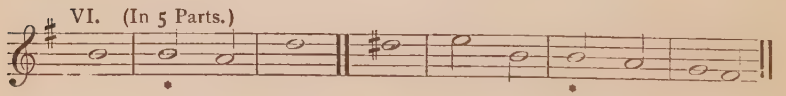

III.

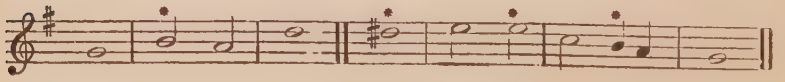

IV.




V. (In 3 Parts.)


Dom. minor 9th,
11th, and minor 13th.


VI. (In 5 Parts.)



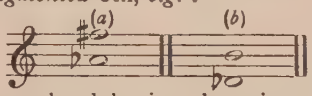
CHAPTER XVII.

Double Root Chords.

245.—The series of chords formed by adding 3rds to given roots being now exhausted (§217), we purpose, in the present Chapter, dealing with chords which are most conveniently described as belonging to two roots. These chords are formed by selecting, and writing as one chord, certain notes derived from the various chords already explained.

246.—The harmonies most frequently combined are those of the *dominant and supertonic*, or those of the *tonic and dominant*. Thus the second root in a double root chord is a *5th above* the first. This interval of a 5th is really a combination of two 3rds, and one which we observed (§47*d*) gave the best progression for the roots of common chords.

247.—By taking the *minor 9th of the dominant* and the *chromatic 3rd of the supertonic* (*a*), and by combining the *minor 9th of the tonic* and the *3rd of the dominant* (*b*) in either a major or a minor key, we obtain on the *minor 6th* (*a*) and upon the *minor 2nd* (*b*) of any scale, the interval of the *augmented* 6th, *e.g.* :—

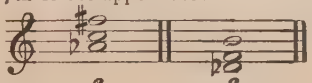


248.—Hence, any chord having the minor 6th or minor 2nd of the scale as its primary bass (§70), and comprising the interval of an augmented 6th from either of these notes, is known as the **chord of the augmented 6th** (§4), or, more rarely, the chord of the sharp 6th.

249.—The chord of the *augmented 6th* which has the *minor 6th* of the scale as its primary bass *will have the dominant and supertonic of the key for its roots*, while the augmented 6th which has the *minor 2nd* of the scale as its primary bass will have the *tonic and dominant* for its roots (§246).* Any chord containing the *interval* of an augmented 6th (or its inversion, a diminished 3rd) is, of course, a *chord* of the augmented 6th.†

250.—The following are the most common forms of chords of the augmented 6th :—

(*a*) **The Italian 6th,** comprising the minor 9th of the lower root, and the major 3rd and the minor 7th of the upper root :—



Roots = 6 / D / G	Roots = 6 / G / C
containing dominant 9th and supertonic 7th.	containing tonic 9th and dominant 7th.

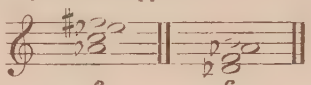
* The augmented 6th on the 2nd of the scale is of comparatively rare occurrence.

† Unless such augmented 6th be an enharmonic equivalent for a dominant 13th (§§232, 236*d*), Ex. 195.

(*b*) **The French 6th,** comprising the minor 9th of the lower root and the upper root with its 3rd and 7th :—

6	6
4	4
3	3
Roots = D / G	Roots = G / C
containing dominant 9th and supertonic 7th.	containing tonic 9th and dominant 7th.

(*c*) **The German 6th,** comprising the minor 9th of the lower root, and the 3rd, the 7th, and the minor 9th of the upper root :—



6	6
♭5	♭5
Roots = D / G	Roots = G / C
containing dominant 9th and supertonic 9th.	containing tonic 9th and dominant 9th.

251.—A careful inspection of the above chords will show us

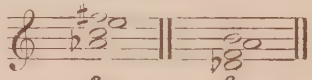
(*a*) That the chord of the augmented 6th is a *chromatic discord* (§§48, 89), because it contains either the major 3rd of the supertonic or the minor 9th of the tonic.

(*b*) That the figuring of the chord of the augmented 6th is identical with that of the dominant 7th, from which it may be distinguished by the degree of the scale upon which it occurs, and the quality of the intervals expressed or implied by the figuring.

(*c*) That 6 and $\frac{6}{5}$ both imply a 3.

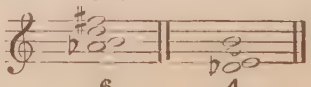
252.—In addition to the Italian, French, and German 6ths, there are other forms of the chord of the augmented 6th which are of less frequent occurrence ; *e.g.*, remembering that the minor 9th of the lower root and the major 3rd of the upper root are essential (§247), we may have

(*a*) The minor 9th of the lower root, combined with the 3rd, the 7th, and the *major* 9th (compare §250*c*) of the upper root :—



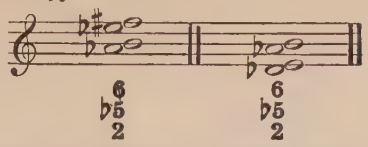
6	6
5	5

(*b*) The minor 9th and the *major* 3rd of the lower root, combined with the upper root and its 3rd (compare §250*b*) :—

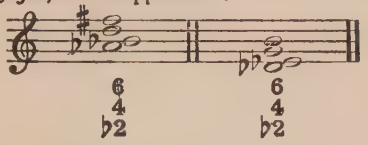


6	4
4	2
2	

(*c*) The minor 9th and the *major* 3rd of the lower root, combined with the 3rd and the *minor* 9th of the upper root :—



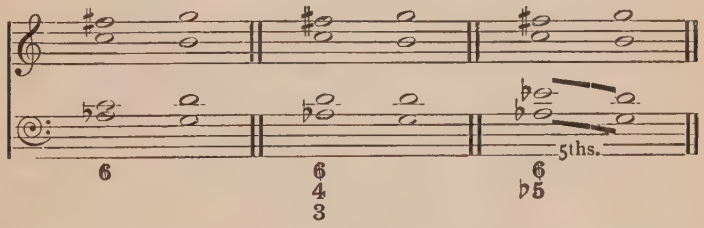
(*d*) The minor 9th of the lower root, combined with the root, the 3rd, and the *minor* 13th (compare §250*b*) of the upper root :—



The last of the above forms is identical in appearance with the *minor 13th written as an augmented 5th* (§232). The form of the augmented 6th given at (*c*) is also identical with the last form of the dominant 13th given in §236*d*. As augmented 6ths the last two chords would resolve upon some chord in the key of C, but if regarded as dominant minor 13ths they would resolve upon a chord in the key of E♭ or A♭ respectively. Illustrations of these chords are given in the *Appendix* (*q.v.*).

253.—The following are the most common **resolutions of the augmented 6th** :—

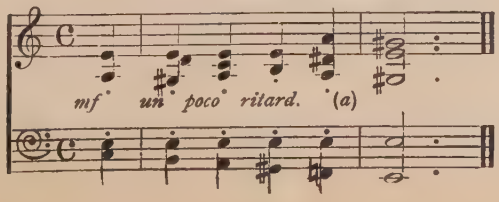
(*a*) When the notes forming the augmented 6th proceed *a semitone in contrary directions* :—



In the following illustrations the augmented 6ths are **resolved in the** manner just described :—

SCHUBERT—"Sonata in A minor." Op. 42.

Ex. 281.



SMART—"Andante in F (Organ)." No. 2.

Ex. 282.

(b) (c)

S. S. WESLEY—"The Wilderness."

Ex. 283.

(d)

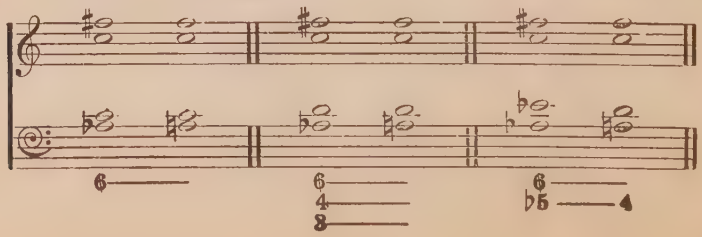
BEETHOVEN—"Quartett in C♯ minor." Op. 131.

Ex. 284.

(c)

At *a* the Italian 6th is shown with a dominant pedal (§§283-287) in the inside part, of which pedal the chord in question is quite independent. The French 6ths in F major and D minor are shown at *b* and *c* respectively. The German 6th at *d* is interesting as showing false notation (F♮ = E♯) and resolution upon the chord of the dominant 11th (in B major) in order to avoid consecutive 5ths which are boldly introduced at *c*. Note that all the above resolutions are as laid down in §253*a*, with the exception of Ex. 283, in which the chord of resolution is that of the dominant 11th instead of the dominant triad, and the notes forming the interval of the augmented 6th resolve by approaching (instead of separating) by contrary motion.

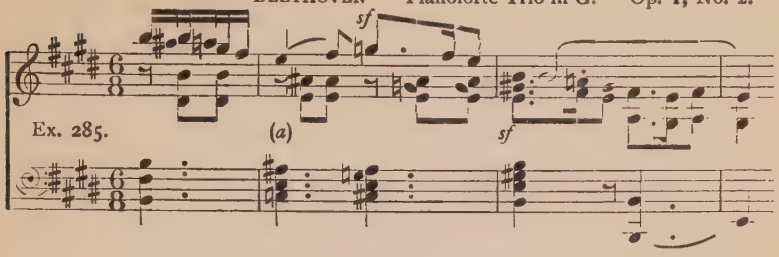
(*b*) When the *upper* note of the augmented 6th *remains stationary*, and the *lower ascends a chromatic semitone.*



Of these progressions we give two illustrations, both from the works of the same composer.

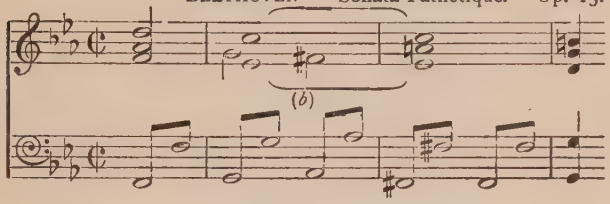
BEETHOVEN—"Pianoforte Trio in G." Op. 1, No. 2.

Ex. 285.



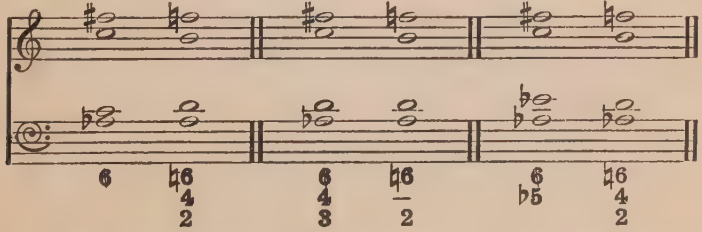
BEETHOVEN—"Sonata Pathétique." Op. 13.

Ex. 286.



At *a* the Italian 6th which, by the addition of the F in the melody, becomes the French 6th (§255) resolves upon the supertonic 9th in the key of E, the upper note, A♯, remaining stationary, while the lower note, C♮, rises a chromatic semitone. The same progression really obtains at *b*, only there the note originally forming the augmented 6th is transferred from the alto to the bass (§256), and the primary bass, A♭, and its note of resolution, A♮, are not in the same part. This false relation, being produced by the resolution of a fundamental discord, is not objectionable (*vide Appendix*, Ex. 13).

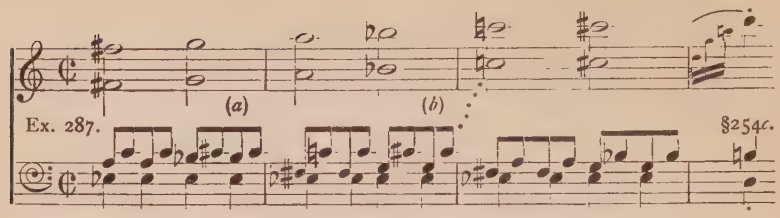
(*c*) When the *upper* note of the augmented 6th *descends a chromatic semitone*, and the *lower note remains stationary*.



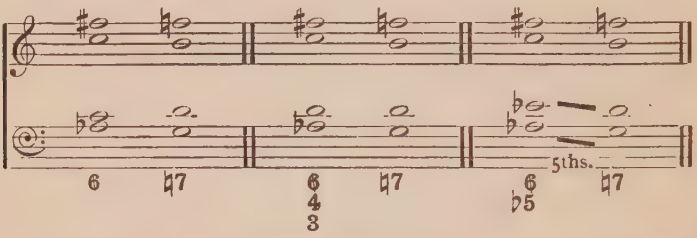
Ex. 287, on the next page, contains a most interesting illustration of this resolution. At *a* the progression is perfectly clear, but at *b* the descent of the augmented 6th a chromatic semitone is divided between the tenor and the treble. Observe that the false relation indicated by the dotted line is unobjectionable (*vide Appendix*, Ex. 13).

CLEMENTI—"Sonata in G."

Ex. 287.



d) When the *upper* note of the augmented 6th *descends a chromatic semitone*, and the *lower note descends a diatonic semitone.*



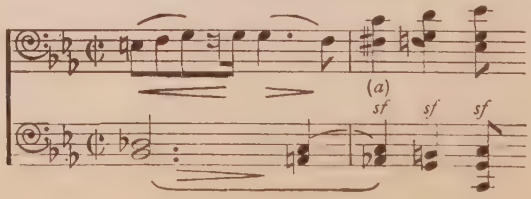
The student should resolve the final chords of the foregoing examples according to the rules given in preceding Chapters, and work out for himself the resolutions of the augmented 6th on the minor 2nd of the scale, which will be in accordance with those given for the augmented 6th on the 6th of the scale in §253, *a*, *b*, *c*, and *d*.

Observe that (in the simple four-part examples given in the text of this section) at *a* the augmented 6th resolves upon the common chord of the dominant; at *b* upon the supertonic 7th, the key of C being understood; at *c* upon the dominant 9th; and at *d* upon the dominant 7th. Similarly, the augmented 6th upon the minor 2nd of the scale will, if resolved as at *a*, be followed by the tonic chord; if resolved as at *b*, by the dominant 7th; at *c*, by the tonic 9th; and at *d*, by the tonic 7th.

With the exception of Ex. 290 (in which the chord at *c* should read F♮, the minor 9th of the supertonic, E♭, instead of E♮, thus producing consecutive 5ths), the examples illustrating §253*d* call for no further explanation.

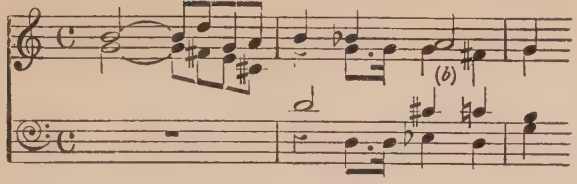
CHOPIN—"Sonata in C minor." Op. 4.

Ex. 288.



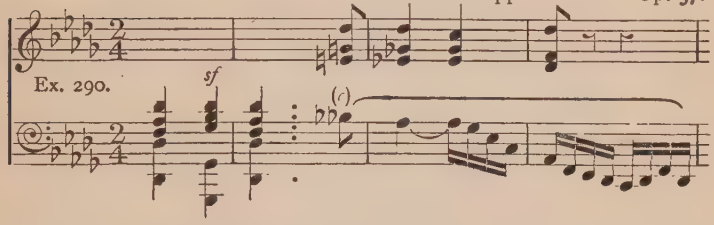
CHERUBINI—"2nd Mass."

Ex. 289.

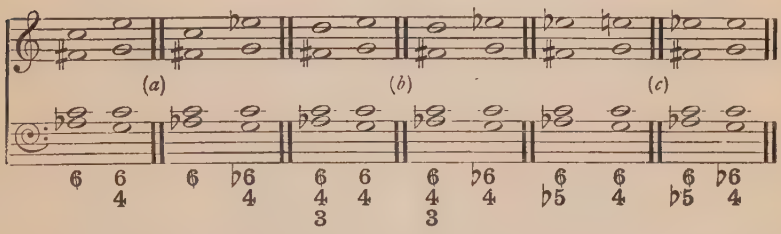


BEETHOVEN—"Sonata appassionata." Op. 57.

Ex. 290.



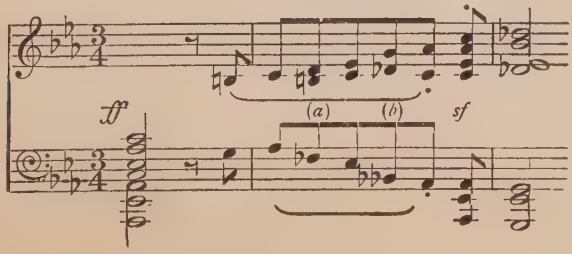
254.—The augmented 6th upon the *minor 6th* of the scale often resolves upon the chord of the tonic major or minor (*a*, *b*). This is most frequently done in the case of the *German 6th* (*c*) and avoids the consecutives shown in §253, *a*.



In the following illustrations there are included some examples of the augmented 6th, on the minor 2nd of the scale, resolving on the tonic chord.

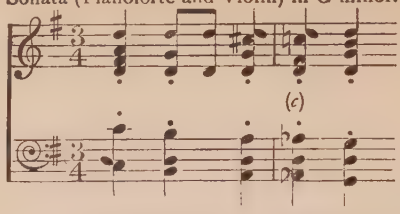
SCHUBERT—"Sonata in C minor."

Ex. 291.



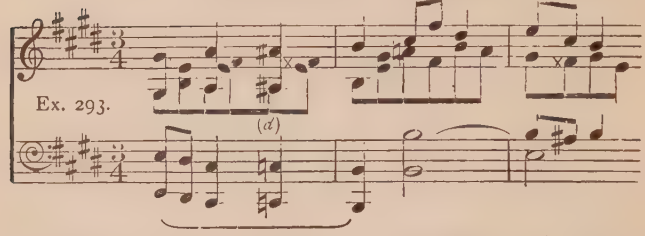
GRIEG—"Sonata (Pianoforte and Violin) in G minor." Op. 13.

Ex. 292.



X. SCHARWENKA—"Minuet in E." Op. 49.

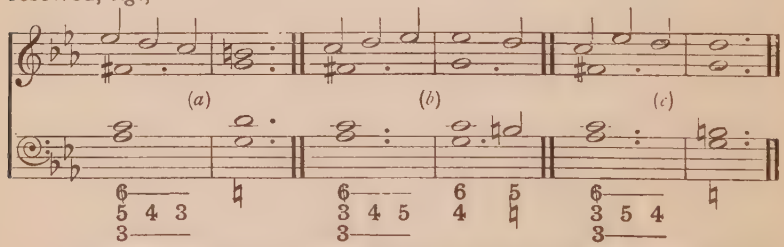
Ex. 293.



At *b* the Italian 6th on the minor 2nd of the scale of A♭ resolves upon the tonic chord, while at *a* the German 6th (B♮ = C♭) with the 3rd omitted, on the minor 6th of the scale, is similarly treated. At *c* the French 6th on the minor 2nd of the scale of G resolves upon the tonic chord, as does the German 6th (on the minor 6th of the scale of E) at *d*. Observe the false notation (F× = G♮) in Ex. 293.

Some exceptional resolutions of the augmented 6th upon the tonic chord will be found in the *Appendix*.

255.—Sometimes *one form of the augmented 6th is followed by another form*, it being understood that the form last used must be duly resolved, *e.g.*,



The resolution at *c* is very useful in avoiding the consecutives shewn in §253*a*.

In Ex. 88 (*Appendix*) we may see the German 6th followed by the French and the Italian, while in Ex. 285 we have the Italian 6th followed by the French and the German. The following illustrations show the Italian 6th followed by the German, the German by the French (without the 3rd), and the French by the German (*a*), also the German 6th followed by the Italian (*b*).

HAYDN—"Sonata (Pianoforte and Flute) in G."

Ex. 294.

(*a*)

MOZART—"Sonata in F."

Ex. 295.

sf (*b*) *p*

256.—In common with other fundamental discords, the augmented 6th may be resolved *ornamentally* (*a*), or may have its 3rd (*b*), 4th (*c*), or 5th (*d*) *transferred from one part to another* :—

(*a*) (*b*) (*c*) (*d*)

6 7 5 6 / 3 — 6 — 6 / 4 / 3 — 6 — 6 5 / ♭5 — 4 3

The resolutions given in Exs. 286 and 294, as well as those contained in Exs. 87-89 (*Appendix*), must be looked upon as more or less ornamental. At *a*, Ex. 296, we give another ornamental resolution of the primary bass of the augmented 6th, which bass first leaps to the 5th of the chord of resolution and then returns to D, the ordinary note of resolution. This is really an augmented 6th in G minor resolved upon the second inversion of the dominant triad. Ex. 297 shows transference combined with ornamental resolution (mostly by means of passing and auxiliary notes) and imitation between the inside parts. Other examples of transference may be seen in Exs. 294 & 295. (*See Appendix, page* 293.)

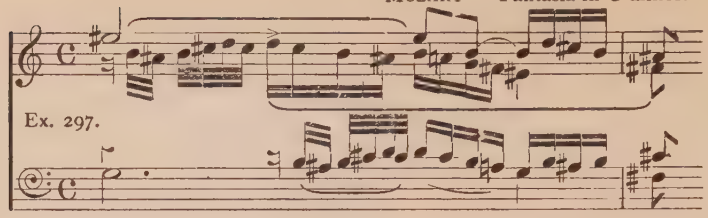
BENNETT—"Pas Triste." Op. 34.

Ex. 296.

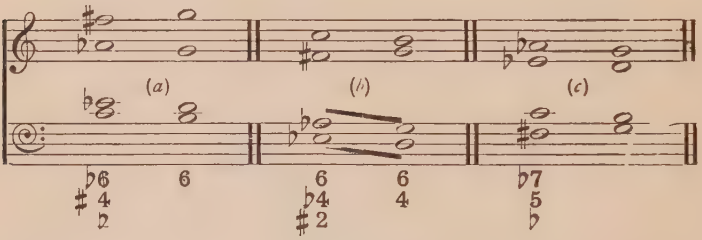
(*a*)

MOZART—"Fantasia in C minor."

Ex. 297.



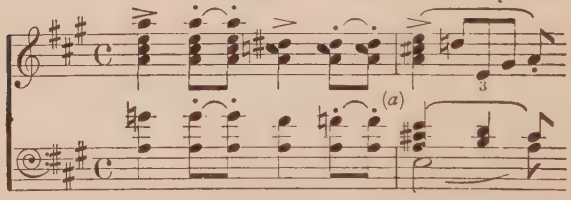
257.—The *Italian and French* 6ths are but *rarely inverted* in vocal music. The inversions of the *German* 6th are, however, of somewhat frequent occurrence. The inversions of the German 6th on the minor 6th of the scale are given below. Those on the minor 2nd of the scale the student should write out, figure, and resolve for himself.



The following examples will repay careful study.

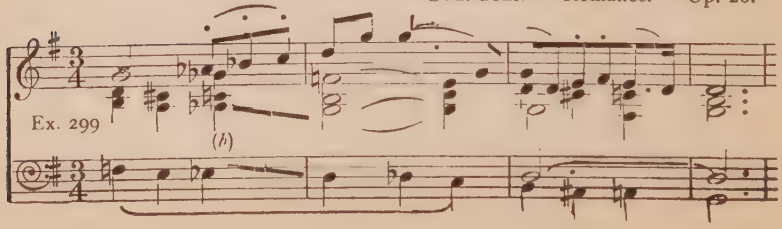
SCHUBERT—"Sonata in A." Op. 120.

Ex. 298.



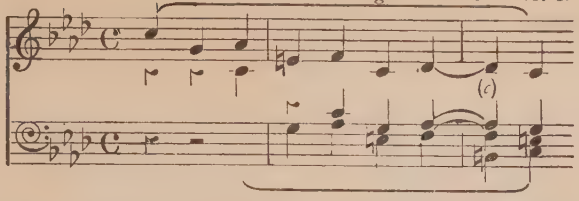
SVENDSEN—"Romance." Op. 26.

Ex. 299



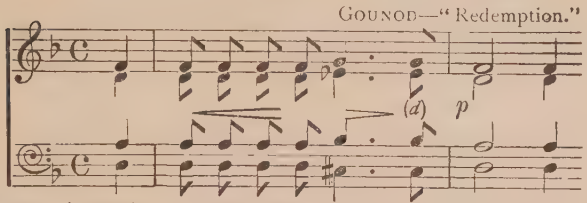
MENDELSSOHN—"Organ Sonata." No. 1.

Ex. 300.



GOUNOD—"Redemption."

Ex. 301.



At *a* the first inversion of the German 6th in A is resolved upon the tonic chord. Observe that the bass of this inversion does not really leap to the dominant, the first note in the next bar, but remains stationary, the dominant in the bass of the last bar being the entry of another part or voice. At *b* we have the second inversion of the German 6th on the 2nd of the scale of G, with false notation of the 6th (G♭ = F♯). Here the resolution is upon the chromatic chord of the tonic 7th in G quitted as the dominant 7th in C and followed by the chord of the French 6th upon the minor 2nd of the latter scale. At *c* and *d* is shown the third inversion of the German 6th upon the minor 6th and minor 2nd of the scale respectively, resolved according to §253*a*, the consecutive 5ths being now consecutive 4ths as in Ex. 299.

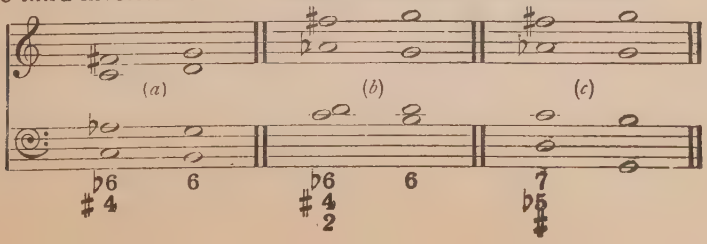
From a study of the above examples we infer

(*a*) That when the German 6th is inverted *the primary bass can be placed above the 5th*, thus avoiding consecutives (§253*a*), and permitting the chord to resolve directly upon the dominant or tonic chord.

(*b*) That the *consecutive 4ths* produced by the resolution of the second inversion of the German 6th are not *considered objectionable* (§85).

(*c*) That the third inversion of a German 6th has the *6th* and not the 7th *in the bass.*

258.—When inverted, the following are the inversions of the Italian and French 6ths generally employed. The last inversion is rarely used on account of its harshness. Observe that the second inversion of the Italian 6th would have the 6th in the bass, while the second inversion of the French 6th has the 4th from the primary bass in the lowest part. The third inversion of the French 6th has the 6th in the bass.



We give an example of each of the possible inversions of the Italian and French 6ths, including the rare inversion with the 6th in the bass.

BEETHOVEN—"Sonata in F." Op. 54.

Ex. 302.

(*a*) (*b*)

F. HILLER—"Study in B♭." Op. 15, No. 24.

Ex. 303.

(*c*)

MACKENZIE—"Jason."

Ex. 304.

(*d*)

BENEDICT—"St. Peter."

Ex. 305.

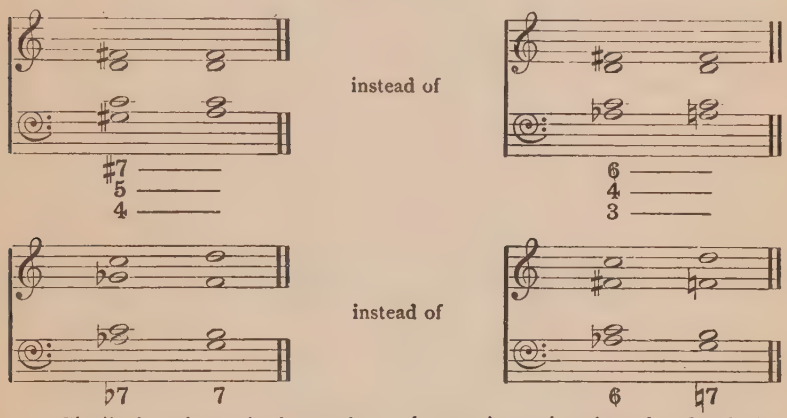
(*e*) (*f*)

At *a* we have the first inversion, and at *c* the second inversion of the Italian 6th. At *b* the combined harmony produces the first inversion of the French 6th, the second inversion of which (upon the minor second of the scale) is shown at *d*. At *e* we have the chord of the French 6th (on the minor 6th of the scale) with the augmented 6th in the bass. At *f* the same inversion is illustrated, but the chord has for its primary bass the minor 2nd of the scale. Both *e* and *f* show false notation, the minor 6th of the scale of D (B♭) being written as an augmented 5th (A♯) and the minor 2nd (E♭) as an augmented 8ve (D♯). At *e*, G♯, the upper

of the two notes forming the interval of the augmented 6th, remains stationary while B♭ (written as A♯), the lower note, ascends a chromatic semitone (§253*b*). A similar resolution takes place at *f*.

259.—The inversions of the augmented 6th are susceptible of all the various resolutions shown in §253, and the student is advised to work these out in different keys.

260.—When in the chord of the augmented 6th the *primary bass ascends a chromatic semitone, or the augmented 6th itself descends a chromatic semitone*, **false notation** (§175) is frequently employed in order to save an accidental, *e.g.*,

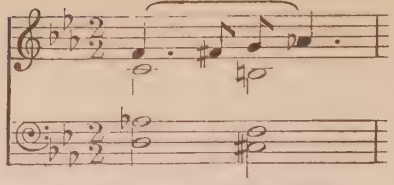


Similarly, the 5th from the primary bass in the chord of the German 6th, when resolving by ascending a chromatic semitone (§254*c*), is sometimes written as a doubly augmented 4th, *e.g.*,

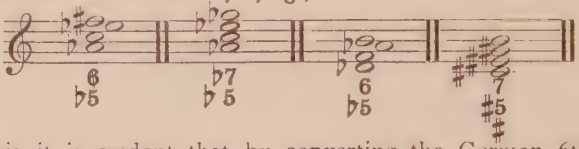
Examples of false notation in the augmented 6th of the chord of the German 6th are to be seen in Exs. 283 and 299, in both of which the augmented 6th is written as a minor 7th, thus giving the chord the appearance of a fundamental 7th. In Ex. 293 the 5th in the chord of the German 6th appears as a doubly augmented 4th, while in Ex. 305 the primary bass of the chord of the French 6th is inaccurately noted. In Ex. 306 we have another interesting example of false notation in the primary bass of the French 6th followed by the German 6th (C♯ = D♭) on the minor 2nd of the scale

WAGNER—"Tristan and Isolde."

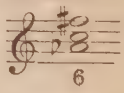
Ex. 306.



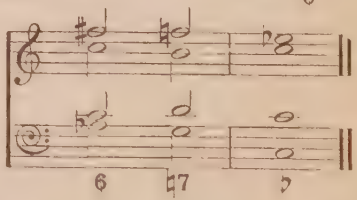
261.—We have already observed (§260) that by **enharmonic change** of the interval of the augmented 6th a *German 6th is converted into a dominant or chromatic 7th, e.g.,*



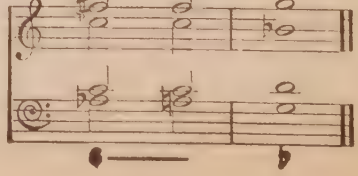
From this it is evident that by converting the German 6th on the minor 6th of the scale into a minor 7th, and quitting this minor 7th as a dominant, supertonic, or tonic 7th, we can modulate into three major and three minor keys. Similarly, from the German 6th on the minor 2nd of the scale we can modulate into three major and three minor keys. And, conversely, the dominant, supertonic and tonic 7ths of any major or minor key may be converted into German 6ths upon the minor 6th or upon the minor 2nd of a major or of a minor scale. The German 6th may also be enharmonically changed, as in the second chord of the above examples, and then quitted as a dominant 13th (§236) in E♭.

262.—Nor does this exhaust the capacity of the augmented 6th for the purposes of modulation, because, as *every augmented 6th may belong to two keys* (*i.e.*, it may occur on the minor 6th of one major and of one minor key, and upon the minor 2nd of another major and of another minor key), it follows that *from any augmented 6th we may modulate into two keys, e.g.*, by means of the chord  we may modulate from C major or C minor

(*a*) into C minor or C major by regarding it as an augmented 6th on the minor 6th of either scale :—



(*b*) into G major or G minor by regarding it as an augmented 6th on the minor 2nd of either scale :—



The following illustrations will give the student some idea of the general treatment of this chord as a medium for modulation.

GUILMANT—"Cantilène Pastorale." Op. 15.

Ex. 307.

(a) (b)

(a)

SCHUBERT—"Sonata in C minor."

Ex. 308.

(c)

MOSCHELES—"Study in F♯ minor." Op. 95, No. 12.

Ex. 309.

(d)

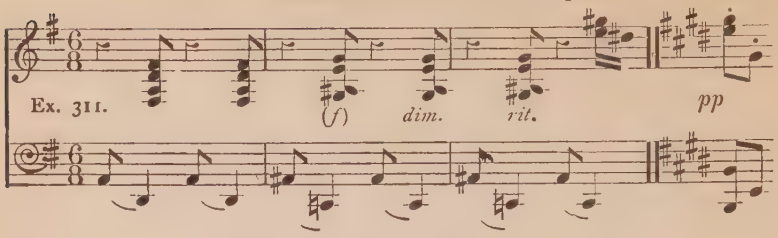
CHOPIN—"Sonata in C minor." Op. 4.

Ex. 310.

(e) *sf* *sf*

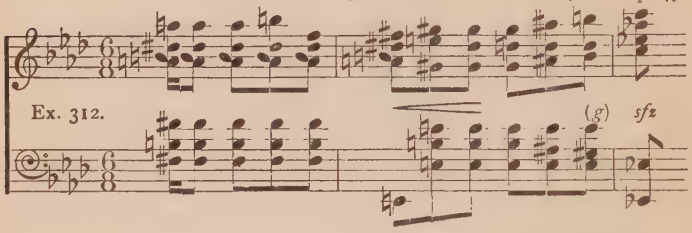
MENDELSSOHN—"Rondo Capriccioso." Op. 14.

Ex. 311.



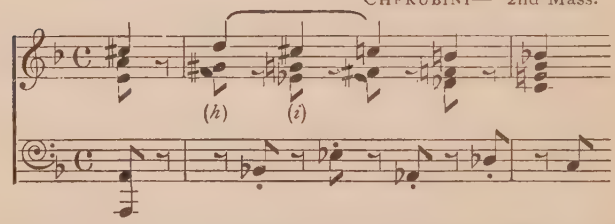
CHOPIN—"Ballade in A♭." Op. 47.

Ex. 312.



CHERUBINI—"2nd Mass."

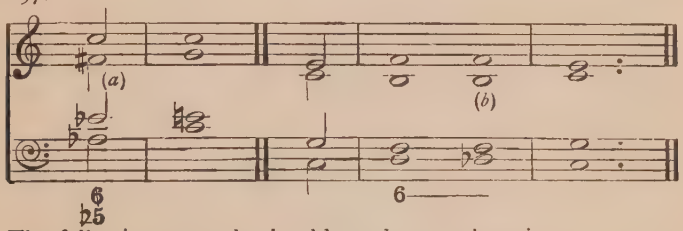
Ex. 313.



At *a* we have a beautiful modulation from F major to B minor effected by approaching the dominant 7th in the latter key as an enharmonic equivalent for the augmented 6th on the minor 2nd of the primary key, *i.e.* F♯, A♯, C♯, E = G♭, B♭, D♭, E. At *b* we have the converse, a modulation from B minor to F major being effected by approaching the dominant 7th in F as an enharmonic equivalent for the augmented 6th on the minor 2nd of the scale of B (B♭ = A♯). The student will observe that the chord implying enharmonic change is written in the notation of the new rather than in that of the primary key (§186). At *c* the dominant 7th in the key of A is quitted as the augmented 6th on the minor 6th of A♭ (E, G♯, B, D = F♭, A♭, C♭, D). At *d* the augmented 6th on the 6th degree of the scale of A minor is quitted as the dominant 13th (7th, major 9th, 11th, and minor 13th) in C major (D♯ = E♭). At *e* the dominant 13th (7th, major 9th, 11th, and minor 13th) in E♭ major is quitted as the augmented 6th (G♭ = F♯) on the 6th degree of the scale of C minor. Observe that the modulations in Exs. 309 and 310 are between major keys and their relative minors or *vice versâ*. At *f* the tonic 13th (7th, major 9th, 11th, and minor 13th) in D becomes the

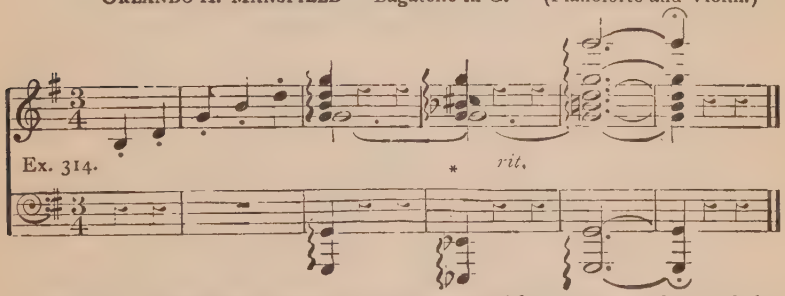
augmented 6th on the minor 6th of the scale of E. At *g* the tonic 7th in E becomes the augmented 6th on the minor 6th of the scale of A♯. At *h* the augmented 6th on the 6th of D minor is resolved upon the augmented 6th on the minor 2nd of the same scale; while at *i* the last named chord is quitted as if on the minor 6th of G, and so on, thus setting up a sequence of augmented 6ths. The student will see for himself that it is only the *German* 6ths which can be converted into fundamental 7ths or 13ths. Sequences of French and Italian 6ths are, however, occasionally found in modern works. In Ex. 306 we have a French 6th on the 6th of C minor followed by one on the minor 2nd, and a sequence of Italian 6ths is to be found in the chorus, "We will praise His name," from Mackenzie's "Rose of Sharon."

263.—The augmented 6th is *frequently used at the cadence*, more especially in instrumental music. When followed by the dominant chord it may be regarded as forming an imperfect cadence (§55) as in Ex. 297.



The following example should need no explanation.

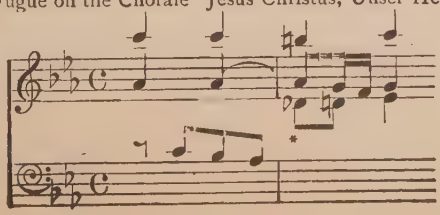
ORLANDO A. MANSFIELD—"Bagatelle in G." (Pianoforte and Violin.)



264.—In three-part harmony composers seldom use any form of the augmented 6th other than the Italian, as the French and German 6ths would require the omission of the 3rd from the primary bass,* *e.g.*,

BACH—"Organ Fugue on the Chorale 'Jesus Christus, Unser Heiland.'" Vol. VI. (Peters' Ed.)

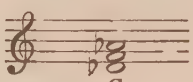
Ex. 315.



In writing the *Italian* 6th in four parts the 3rd from the primary bass is doubled. In five-part harmony the note doubled is the 3rd from the primary bass of the Italian or of the German 6th and the 4th from that of the French 6th.

265.—In harmonizing a melody, the augmented 6th on the minor 6th of a scale may be employed when the *sharpened 4th* of the scale proceeds in accordance with the rules affecting the progression of the upper note of the chord of the augmented 6th, *i.e.* rises a diatonic semitone, falls a chromatic semitone, or remains stationary.*

266.—By combining the minor 9th of the tonic root with the minor 7th and 9th of the dominant, we obtain (in a major or in a minor key) a chromatic chord known as **the chord of the flattened supertonic,** *e.g.*,

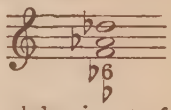


Roots = G
C

containing tonic 9th and dominant 9th in C major or C minor.

This chord, it will be observed, consists of the 2nd, 6th, and 9th degrees of the harmonic chromatic scale given in §111, a scale which contains all the notes employed in the construction of chromatic chords, including that of the augmented 6th. Another explanation of the derivation of the chord of the flattened supertonic is to regard it as the three upper notes of the tonic minor 13th (§216).

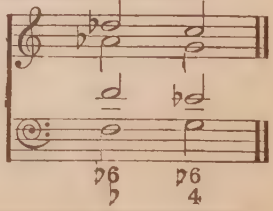
267.—The chord of the flattened supertonic has, of course (§63), *two inversions.* In vocal music it is rarely used in its original position or even in its second inversion. But in its *first inversion, in which it appears as a chord of the minor 6th and minor 3rd on the subdominant*, it is very common, and is known by the name of **the Neapolitan 6th.**



268.—Remembering that this chord occurs on the subdominant of any major or minor scale, there will be no difficulty in determining its *key note* (which must be a 4th below the primary bass) or its *roots* (which are the tonic and dominant of the key).

269.—*The Neapolitan 6th*, although formed of notes dissonant with its roots, *has no note dissonant with the primary bass.* The chord is therefore free in its progression (§203), but it is generally followed

(*a*) By the chord of the tonic



* Before proceeding further the student should answer questions 1-33 at the end of this Chapter.

(*b*) By the chord of the dominant (the separation of the two notes forming a chromatic semitone not being regarded as a false relation, *vide* §41), or the chord of the dominant 7th.

(*c*) By the chromatic chord on the supertonic, or the chord of the supertonic 7th.

We give some illustrations of the treatment of the Neapolitan 6th by various composers.

BENNETT—"L'Amabile." Op. 29.

Ex. 316.

(*a*)

CHOPIN—"Prelude in C minor." No. 20.

Ex. 317.

(*b*)

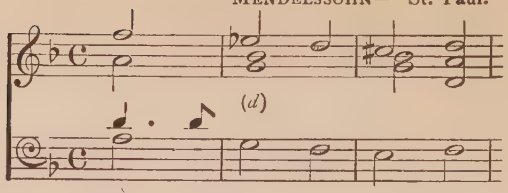
CHOPIN—"Waltz in A minor." Op. 34, No. 2.

Ex. 318.

(*c*)

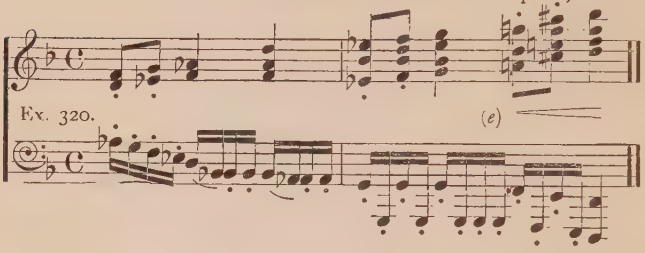
MENDELSSOHN—"St. Paul."

Ex. 319.



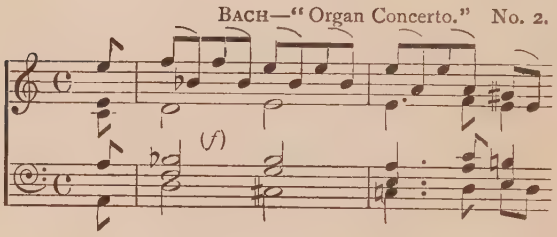
BRAHMS—"Variations." Op. 21, No. 2.

Ex. 320.



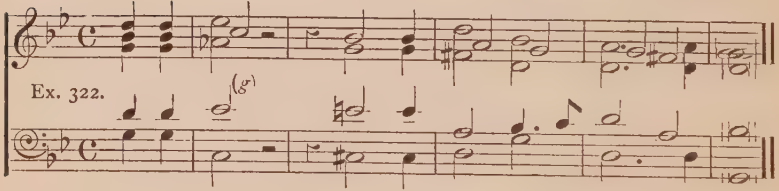
BACH—"Organ Concerto." No. 2.

Ex. 321.



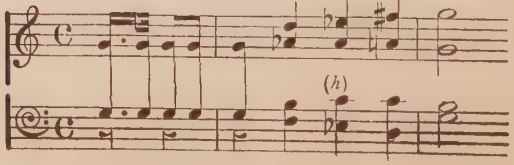
HANDEL—"Solomon."

Ex. 322.



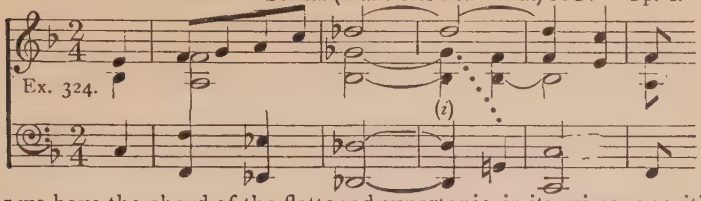
BARNBY—"Rebekah."

Ex. 323.



GRIEG—"Sonata (Pianoforte and Violin) in F." Op. 8.

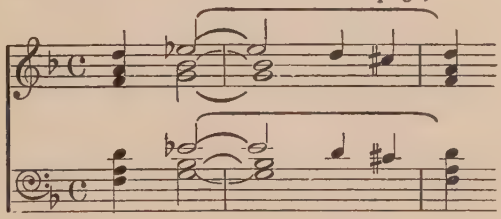
Ex. 324.



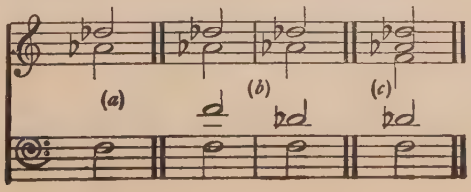
At *a* we have the chord of the flattened supertonic, in its primary position, resolving on the dominant 11th, and, at *b*, the same chord resolving on the dominant 13th. The awkward leap of the tritone or augmented 4th in the bass would be somewhat objectionable in vocal music. At *c* the first inversion of the flattened supertonic chord resolves on the chord of the dominant 7th. Observe that the real bass of the second bar of Ex. 318 is D; A in the melody is a passing note (§123). At *d* the Neapolitan 6th resolves upon the dominant 13th (7th, 9th, 11th, and 13th) in D minor. At *e* a chord approached as the tonic chord in E♭ is resolved (as a Neapolitan 6th) upon the first inversion of the tonic chord of D minor, thus showing modulation by means of the Neapolitan 6th. At *f* the latter chord is resolved upon a tonic 9th in A minor, and, at *g*, upon a supertonic 9th in G minor. Ex. 323, *h*, shows the second inversion of the flattened supertonic resolved upon the dominant 7th, while, at *i*, the former chord is resolved upon the dominant 11th, allowable false relation being introduced between the chromatic chord and its chord of resolution. (*See Appendix.*) Like other fundamental chords, the Neapolitan 6th may be ornamentally resolved, *e.g.*,

BEETHOVEN—"Sonata in D minor." Op. 31, No. 2.

Ex. 325.

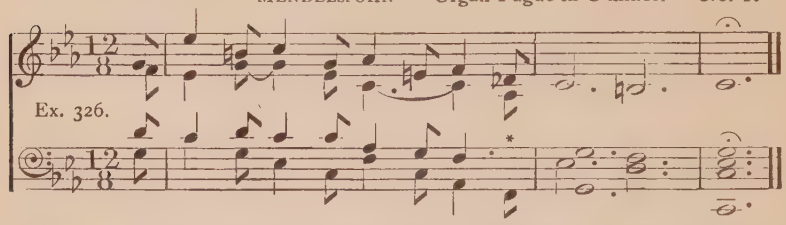


270.—In three-part harmony the Neapolitan 6th will need neither doublings nor omissions (*a*), but in four-part writing it is usual to double the primary bass *or* the 6th (*b*), and, in five parts, the primary bass *and* the 6th (*c*).



271.—The Neapolitan 6th is often used in approaching a cadence, and its employment in such a connection gives to the cadence the name of **the pathetic cadence**, *e.g.*,

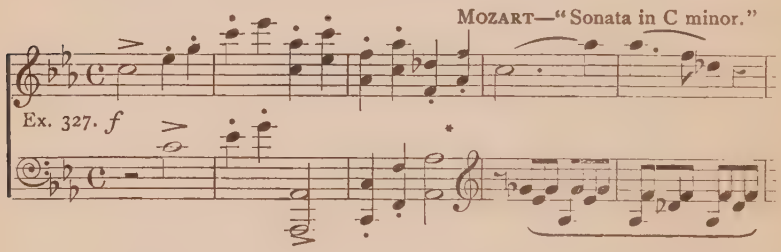
MENDELSSOHN—"Organ Fugue in C minor." No. 1.



272.—In harmonizing a melody, the Neapolitan 6th can be used whenever the *flattened supertonic* proceeds to the tonic (§269*a*, *c*), to the leading note (§269*b*), or to the supertonic of the key (§269*c*).

273.—As it is identical in appearance with the first inversion of a diatonic triad, the Neapolitan 6th is often used for the purposes of modulation, being approached as a chromatic chord in one key and quitted as a diatonic chord in another, or *vice versâ*. As a major triad may belong to five keys (§19) it is evident that from a Neapolitan 6th we may modulate to five different keys, three major and two minor. One example of modulation by means of the Neapolitan 6th has been given in Ex. 320. There the tonic chord in the primary key was quitted as the Neapolitan 6th in the new key. We now show the converse, the Neapolitan 6th in C minor being quitted as the tonic chord in D♭ major.

MOZART—"Sonata in C minor."



QUESTIONS ON CHAPTER XVII.

1.—What do you understand by a double root chord?

2.—What roots are most frequently combined, and at what distance are they from each other?

3.—State the derivation of the interval of the augmented 6th, and say upon what degrees of a scale it may be placed.

4.—Describe the chord of the augmented 6th, state where it may occur, and give its alternative name.

5.—Name the roots of the chord of the augmented 6th upon the minor 6th and minor 2nd of the scale respectively.

6.—Why cannot the augmented 6th belong to one root?

7.—Give the number, names, and intervals of the various forms of the chord of the augmented 6th.

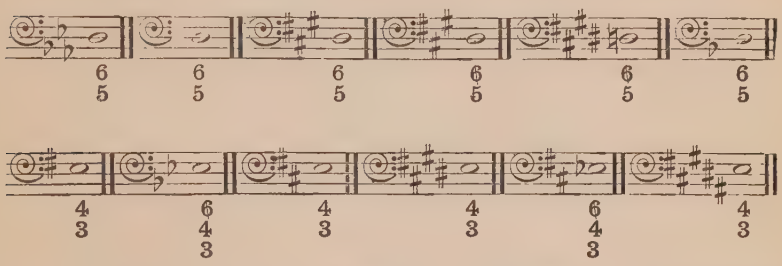
8.—Shew what chords, or what fragments of harmonies, are employed in these various forms.

9.—Which form of the augmented 6th produces the harshest dissonance?

10.—To what class of chords would the augmented 6th belong?

11.—What interval from the bass is implied by 6 and $\flat\overset{6}{5}$.

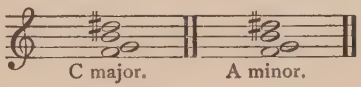
12.—Distinguish between the following chords by filling up the bass and giving the roots and resolutions of the harmonies indicated:—



13.—What intervals are essential to every form of the augmented 6th?

14.—Describe some of the less common forms of this chord.

15.—Correctly describe and resolve these chords:—



16.—Give four rules for the progression of the notes forming the interval of the augmented 6th, and give the names of the chords of resolution which could be implied by such progressions.

17.—What difficulty is sometimes encountered in resolving the German 6th, and what method of resolution is best calculated to remove this difficulty?

18.—May one form of the augmented 6th resolve upon another?

19.—What resolution, allowed in the case of French and Italian 6ths, is forbidden in that of German 6ths?

20.—Give examples of ornamental resolutions of the chord of the augmented 6th.

21.—What intervals in this chord may be transferred from one part to another?

22.—Which form of the augmented 6th is most frequently inverted?

23.—What have you to remark concerning the resolution of the second inversion of a German 6th?

24.—What interval from the primary bass is in the bass in the second inversion of a French 6th, and what in the last inversion of a German 6th?

25.—When is false notation employed in writing the chord of the augmented 6th?

26.—What chord is obtained by enharmonic change of the augmented 6th; which form of the augmented 6th is thus changed; and into how many keys may we modulate, starting from the chord thus obtained?

27.—To how many keys may an augmented 6th belong?

28.—Into how many keys may we modulate by means of the augmented 6th?

29.—Modulate from any key to a key a semitone above or below by means of enharmonic change of the augmented 6th or dominant 7th.

30.—Write examples of the cadential use of the augmented 6ths on the minor 6th and minor 2nd respectively of the scale of G major.

31.—Which form of the augmented 6th is most suitable for three-part harmony?

32.—What notes in the augmented 6th must be doubled in four parts, and what in five?

33.—What melodic progression generally denotes the use of the augmented 6th?

34.—Show the derivation of the chord of the flattened supertonic.

35.—Of how many inversions is this chord capable, which inversion is most frequently used, and by what name is it known?

36.—To how many keys may a Neapolitan 6th belong, and upon what degree of the scale is it formed?

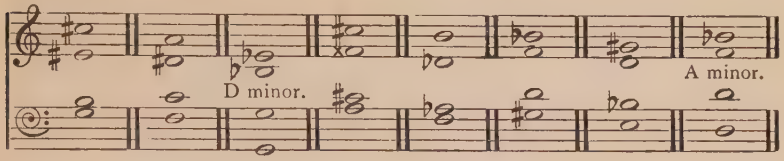
37.—Give three resolutions of this chord, and say why these are not compulsory.

38.—What is the pathetic cadence?

39.—What notes in the chord of the Neapolitan 6th require doubling in four-part harmony, and what in five-part?

40.—When is the possible use of this chord denoted in the melody?

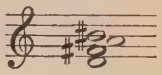
41.—Resolve and describe the following chords, giving the roots and the key of each :—



42.—Upon the note E write a supertonic 6th, an added 6th, a Neapolitan 6th, a French 6th, a German 6th, and an Italian 6th.

43.—Resolve the chords in question 42, introducing as many suspensions as possible in the chords of resolution.

44.—Resolve the following chord :—(*a*) as an augmented 6th on the minor 6th of a scale, (*b*) as an augmented 6th on the minor 2nd of a scale, and (*c*) (by enharmonic change) as a dominant 7th.

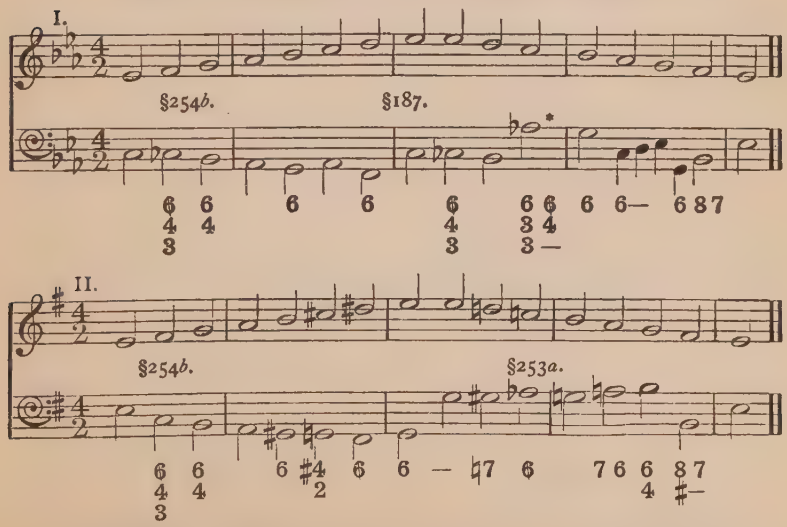


45.—Write an augmented 6th on the note F, and from it modulate into as many keys as you possibly can.

46.—By means of simple four-part examples, shew all the modulations which may be effected by quitting the Neapolitan 6th in E minor as the first inversion of a major triad.

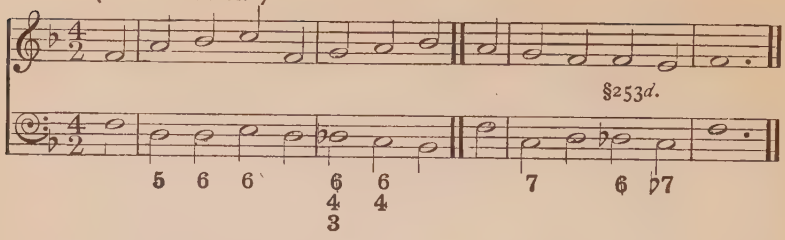
Exercises on Chapter XVII.

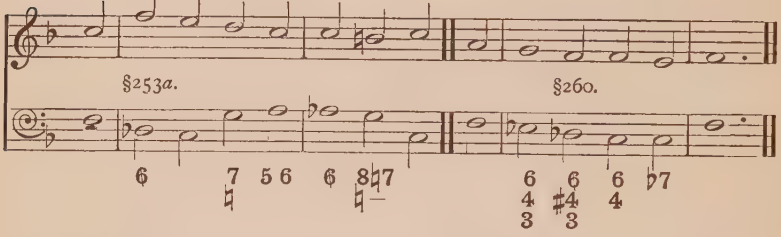
(Roots to be indicated as in previous Chapters.)



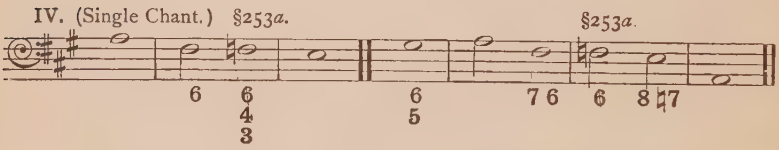
* This chord is not an augmented 6th, but an enharmonic equivalent (F♯=G♭) of the form of the dominant 13th explained in §233.

III. (C.M. "Dundee.")

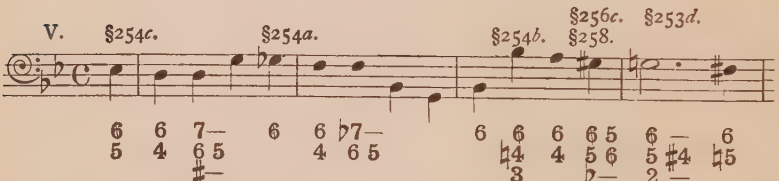


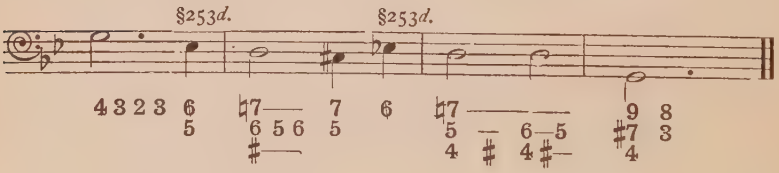


IV. (Single Chant.)

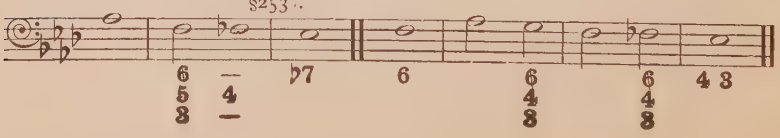


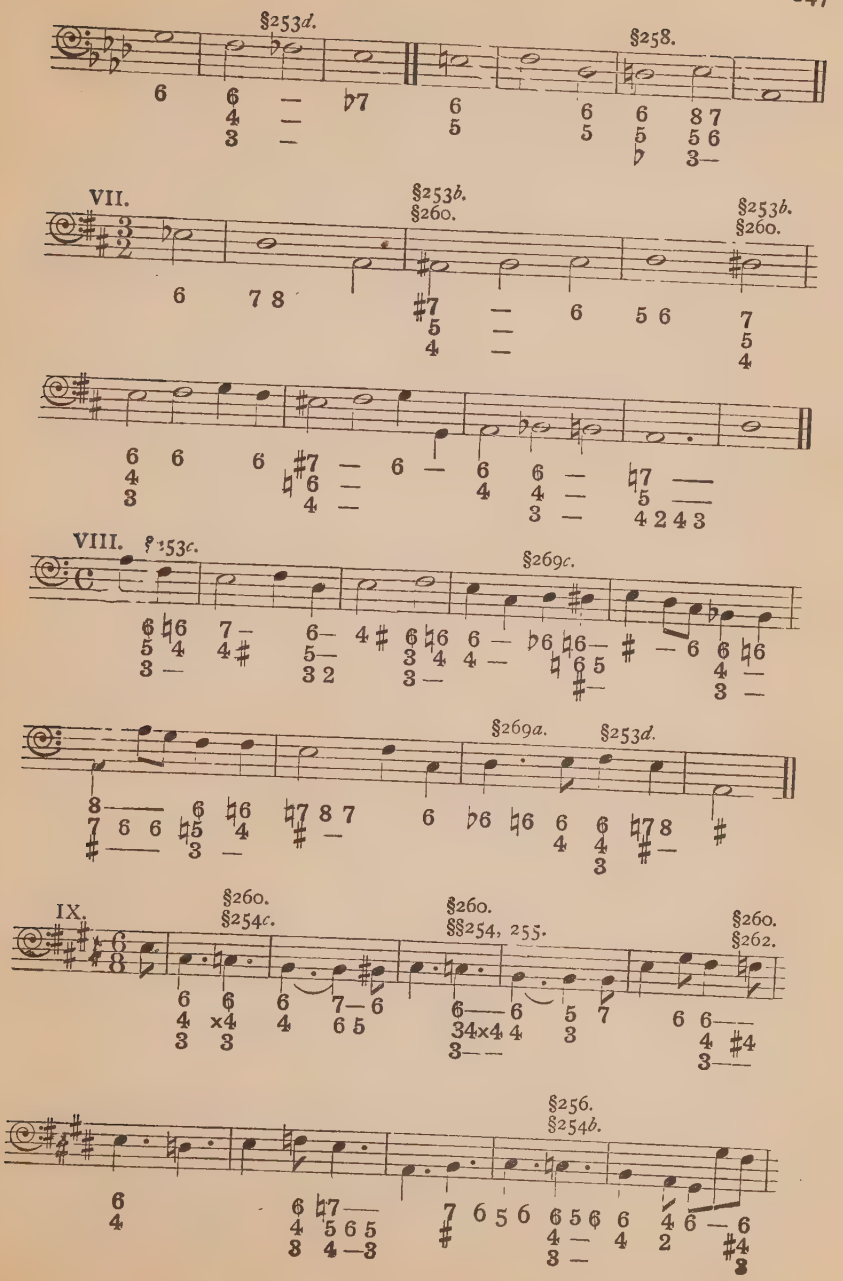
V.

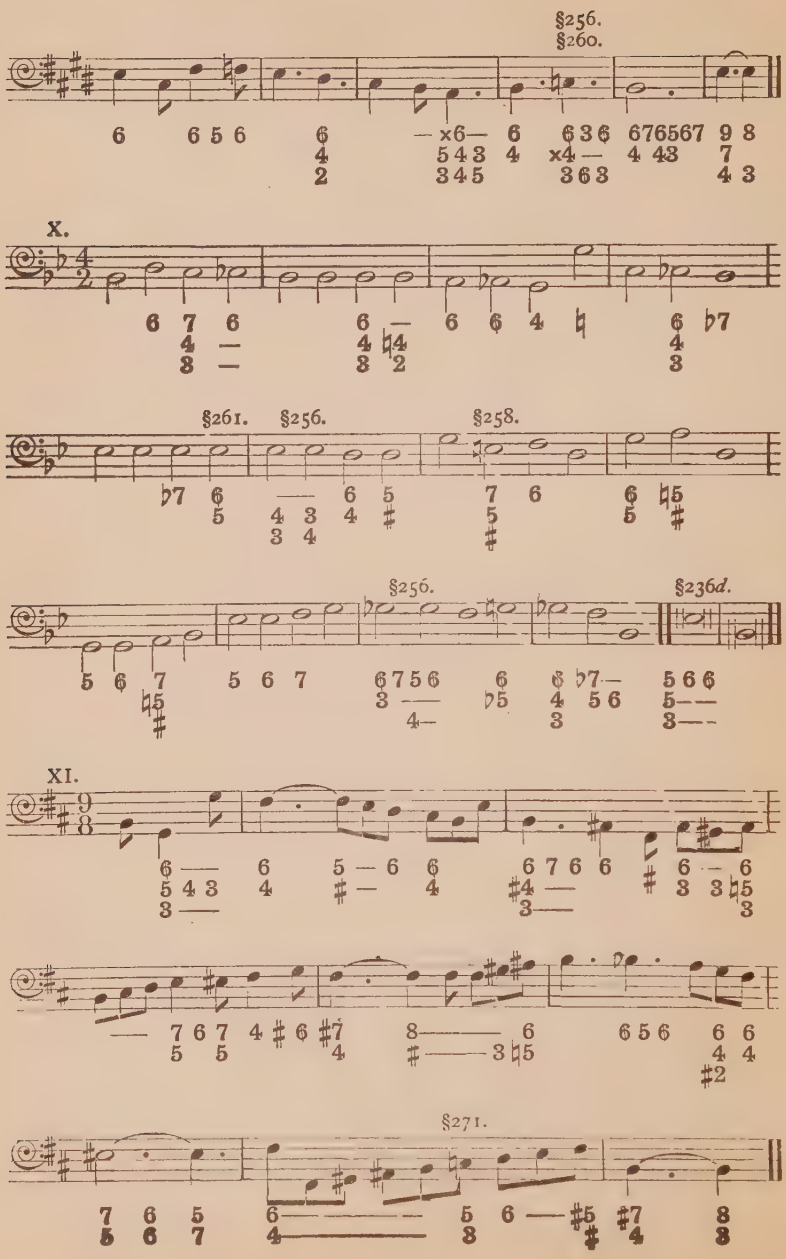




VI. (Double Chant, in 5 Parts.)




§253d.
§258.
VII.
§253b.
§260.
§253b.
§260.
VIII.
§253c.
§269c.
§269a.
§253d.
IX.
§260.
§254c.
§260.
§§254, 255.
§260.
§262.
§256.
§254b.


§256.
§260.
X.
§261.
§256.
§258.
§256.
§236d.
XI.
§271.

XII.

§269*a*. §269*c*.

♭6 6 ♮5 ♮7 8 6 ♭6 ♮6 7 6 5 6
4 ♮ 2 3 ♮ — 4 ♮

6 6 ♮7 8 ♮4 6 — 6 ♮5 — ♮
4 ♮ 2 ♮4 — 4 ♮
3 —

6 6 ♮7 8 6 ♭♭6 6 7 9 8
4 5 6 ♮5 ♭ ♭ 4 ♮ ♮7 3
4 ♮ 4

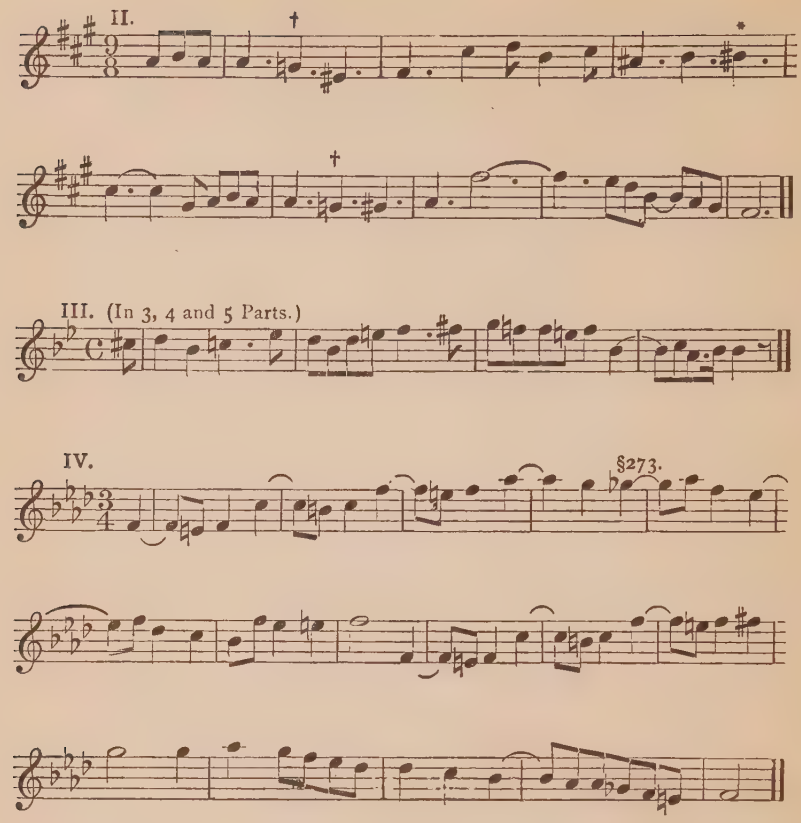
§269*b*. §271. §263.

6 6 ♭6 ♮5 6 ♭6 6 7 5 6 6
4 4 ♮ 4 ♮5 5 —
♮2 ♮

MELODIES.

I.

* Augmented 6th. † Neapolitan 6th.

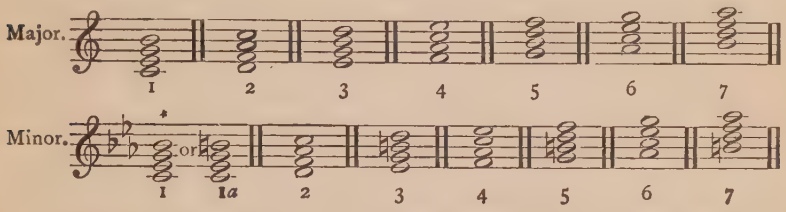


* Augmented 6th. † Neapolitan 6th.

CHAPTER XVIII.

Secondary Sevenths and Pedals.

274.—If we take each note of a major and of a minor scale as a primary bass (§70), and above it add 3rds, in accordance with the signature, until we have formed a chord of the 7th, we obtain the following series :—



With the exception of No. 5, these 7ths are not fundamental 7ths in their *root* positions because they do not contain major 3rds, perfect 5ths, and minor 7ths from their lowest notes (§170). Therefore these lowest notes are merely primary basses (§70), and *the chords are peculiar arrangements of dominant harmonies already explained, e.g.*,

No. 1.—Dominant 11th, 13th, root, and 3rd.
No. 2.—Dominant 5th, 7th, 9th, and 11th (*i.e.*, a form of the dominant 11th, *vide* §202).
No. 3.—Dominant 13th, root, 3rd, and 5th.
No. 4.—Dominant 7th, 9th, 11th, and 13th (*i.e.*, a form of the dominant 13th, *vide* §236).
No. 5.—Chord of the dominant 7th.
No. 6.—Dominant 9th, 11th, 13th, and root.
No. 7.—Dominant 3rd, 5th, 7th, and 9th (*i.e.*, the first inversion of the dominant 9th, *vide* §§184 & 185).

These chords (with the exception of No. 5) are generally called **secondary 7ths,** non-dominant 7ths, or **diatonic discords.** The first term seems to be preferable, as furnishing a distinct name for this class of chords; the second is evidently misleading, because all the chords in question have the dominant for their root; while, on the other hand, the term diatonic discords would, strictly speaking, apply equally to dominant 7ths, the very chords from which it is desirable to distinguish them. All the chords are fragments of dominant harmony, Nos. 2, 4, and 7 being forms of dominant 9ths, 11ths, and 13ths, already explained, while No. 5 is a complete dominant 7th. We have, therefore, only to explain the derivation and progression of Nos. 1, 3, and 6.

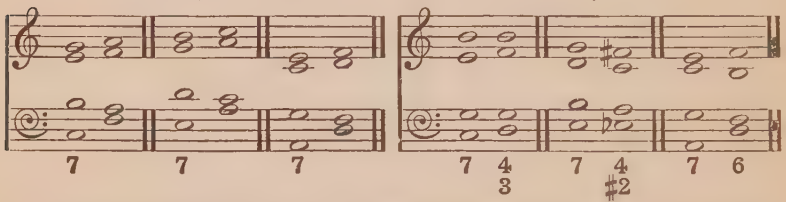
275.—That these chords are not suspensions is evident from the fact that they contain no unessential notes (§135) and need no

* This form, in order to avoid the augmented 2nd, is generally used when the 7th is preceded or followed by the minor 6th.

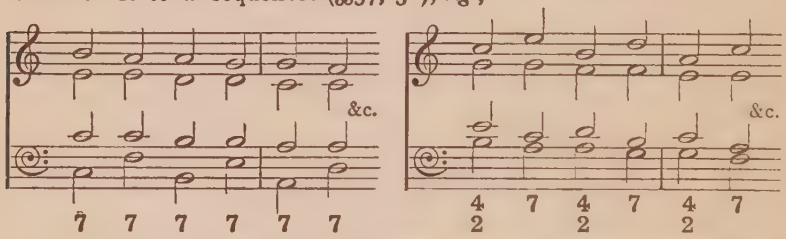
preparation. Neither can they be chromatic chords, because they have no notes contrary to the key signature (§48), so that the student will not require to be cautioned against confounding the *diatonic 7ths* on the tonic and supertonic with the *chromatic 7ths* explained in Chapter XI.

276.—As most of the diatonic discords have only one interval dissonant from the primary bass, it follows that the other intervals are free in their progression (§203). The most important dissonant note, *the 7th from the primary bass, generally falls one degree or remains stationary*, its progression being determined by the chord of resolution, a chord which is either one whose root or primary bass is a 4th above or 5th below the primary bass of the diatonic discord, or some fundamental harmony (§89) in the key. We give some resolutions of Nos. 1, 3, and 6; (*a*) on a chord a 4th above, and (*b*) on fundamental harmony.

(*a*) (*b*)



277.—Fundamental discords being permitted to resolve upon their own roots (§172), it follows that *secondary 7ths may resolve upon other secondary 7ths*, this process being particularly useful and effective in the formation of tonal sequences (§§37, 38), *e.g.*,

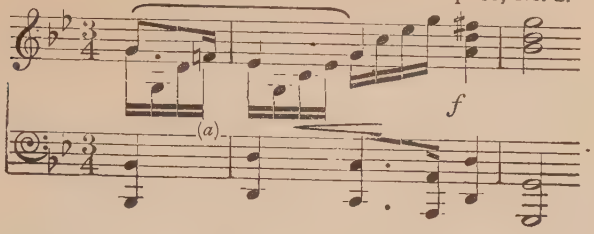


278.—From the second of the above examples it is obvious (*a*) that the intervals of the secondary 7ths may be *transferred* from one part to another, and (*b*) that secondary 7ths may be *inverted*. It will scarcely be necessary to remark (*c*) that each 7th has three inversions, *figured like those of the dominant 7th* (from which they may be distinguished by the quality of their intervals and the degrees of the scale upon which they occur), (*d*) that secondary 7ths may be *ornamentally resolved*, and (*e*) that these chords may have the *5th* from the primary bass *omitted* and the ***primary bass doubled.***

We now give some quotations illustrating the general treatment and the most important **resolutions of secondary 7ths on the tonic, mediant, and submediant.**

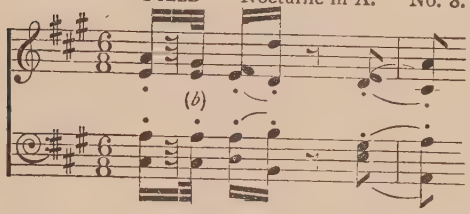
SCHUMANN—"Kreisleriana." Op. 16, No. 2.

Ex. 328.



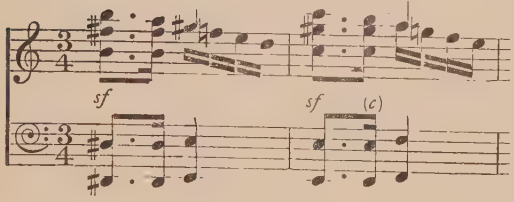
FIELD—"Nocturne in A." No. 8.

Ex. 329.



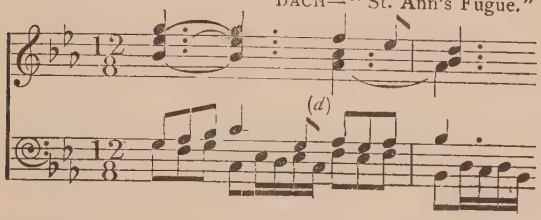
MENDELSSOHN—"St. Paul."

Ex. 330.



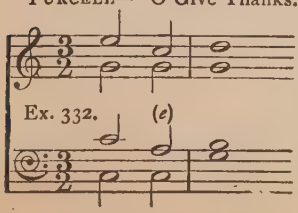
BACH—"St. Ann's Fugue."

Ex. 331.



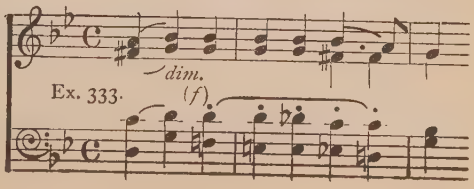
PURCELL—"O Give Thanks."

Ex. 332.



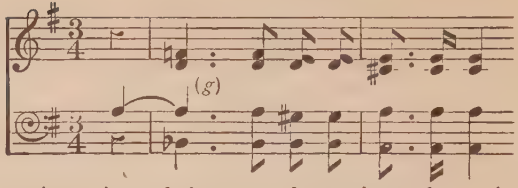
WAGNER—"Tannhäuser."

Ex. 333.



CHERUBINI—"2nd Mass."

Ex. 334.

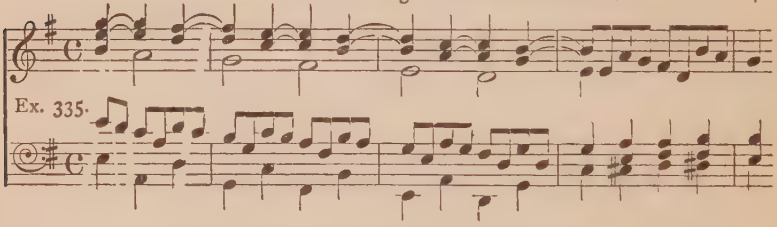


At *a* the first inversion of the secondary 7th on the tonic of G minor resolves on the subdominant chord (a 4th above), the D in the bass of the second bar being an auxiliary note (§127). A similar resolution of a secondary 7th on the tonic of a major key is shewn at *b*. Observe the 9 to 8 on the subdominant resolved upon a different root (§152). At *c* the first inversion of the secondary 7th on the mediant of A minor resolves upon the submediant triad a 4th above. At *d* the secondary 7th on the submediant, prepared by the first inversion of the tonic, resolves upon the supertonic triad, again a 4th above. At *e* the same chord in the key of C is resolved upon the dominant harmony. Here the hidden 5ths between the outside parts are allowable, both chords being parts of the same harmony, and the melody moving conjunctly (§44). At *f* the secondary 7th on the tonic is resolved upon a supertonic 11th. Observe that the second chord in the second bar of Ex. 333 should read C♯ and not D♭. Finally, at *g*, the secondary 7th on the submediant of D minor resolves upon the augmented 6th in that key. The student will observe that the illustrations just explained exemplify all the resolutions given in §276.

We now show, in Ex. 335, a sequence of secondary 7ths (§277), and, in Ex. 336, an example of ornamental resolution.

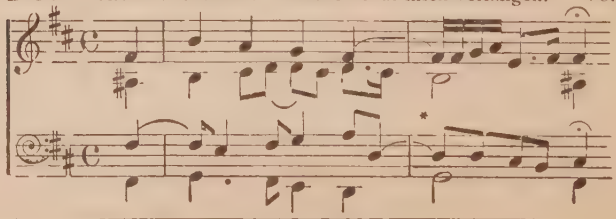
BACH—"Organ Prelude in E minor." Vol. VIII.†

Ex. 335.



BACH—"Choral Prelude on 'Herzlich thut mich verlangen.'" Vol. V.†

Ex. 336.



† Peters' Edition.

279.—Modulation by means of secondary 7ths is effected by approaching the 7th as secondary in one key, and quitting it as secondary or dominant in another, *e.g.*, the secondary 7th on the tonic of C major may be quitted as a form of the dominant 13th in G major (§236). Similarly, the secondary 7th on the subdominant of C major may be quitted as a tonic (secondary) 7th in F major, or *vice versâ*.

The following examples will sufficiently illustrate modulation by means of secondary 7ths. At *a* the secondary 7th on the sixth degree of B minor is quitted as the dominant 13th in the key of D major, while at *b* the dominant 13th, or subdominant (secondary) 7th, in the key of G major is quitted as the secondary 7th upon the sixth degree of E minor.

BENNETT—"Woman of Samaria."

Ex. 337. (*a*)

HAYDN—"Creation."

Ex. 338. (*b*)

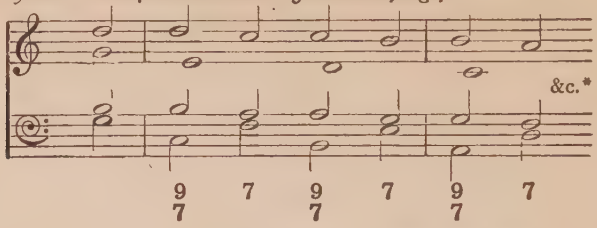
280.—While, in common with most fundamental discords (§138*f*), *secondary 7ths need not be prepared*, those containing the interval of a major 7th from the primary bass are softened and rendered less harsh either by preparation, or by introduction by means of conjunct movement (or contrary motion) with the bass.

281.—In three-part harmony the primary bass, the 3rd, and the 7th should be present in every secondary 7th. In five-part writing we may double the primary bass or the 5th, provided the latter note be consonant with the primary bass and therefore free in its progression (§203).

282.—**Secondary 9ths,** though possible, are somewhat rarely used. They are formed in the same way as secondary 7ths, the 5th from the primary bass being generally omitted in four-part harmony.* Like

* *Vide Appendix*, Ex. 73.

secondary 7ths, the *secondary 9th usually resolves upon a chord whose root or primary bass is a 4th above or a 5th below, e.g.,*



283.—A **pedal** is a note, generally in the bass, which is *sustained or repeated* during the progression of other chords, to the majority of which chords the pedal note belongs, but to one or more of which it must be foreign. Hence, whi'e a pedal is a sustained or repeated note, all sustained or repeated notes are not pedals. The tonic and dominant at the conclusion of Mendelssohn's Wedding March are not pedals, not because they are executed as shakes, but because neither above nor below them is there written any chord of which they do not form an essential part.

284.—The term pedal is derived from the sustaining by the pedals of the holding notes so frequently found in the bass of organ music. Hence the French term "Point d'Orgue."

285.—When the pedal note occurs in any other part than the bass it is termed an **inverted pedal.**

286.—The notes of the scale usually selected for pedals are the *tonic and dominant.* Sometimes these notes are sustained or repeated simultaneously. This is called a **double pedal.** A **triple pedal** consists of tonic, dominant, and supertonic employed simultaneously. In the case of double and triple pedals it is almost impossible to employ chords of which neither pedal note shall form a part.

287.—The tonic pedal is generally found at the beginning or end of a movement, *e.g.*, at the beginning of Beethoven's Pastoral Sonata, or at the end of the first two fugues in the Wohltemperirtes Clavier. Sometimes the dominant and tonic are both employed as pedal notes, but at different places in the movement and not simultaneously. When this is the case the dominant pedal generally precedes the tonic, *e.g.*, the last movement of Mendelssohn's Fourth Organ Sonata.

288.—The first and last chords employed above or below a pedal should be chords of which the pedal note forms a part.

289.—When the pedal note is in the bass *the part next above the pedal becomes the real bass for the time being*, and, as such, must progress in accordance with the laws affecting the bass part of any passage of

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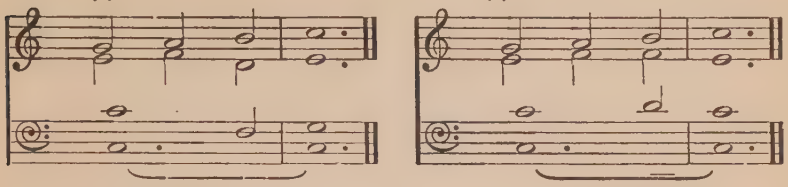
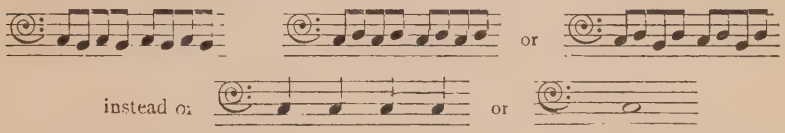
* **The student should now answer questions 1-19 at the end of this Chapter.**

harmony. Consequently the example at *a* is, strictly speaking, incorrect, the bass of a $\frac{6}{4}$ skipping to another chord (§86, II.), and the dominant 7th resolving upwards in its last inversion. These faults are corrected at *b*.

(*a*) (*b*)



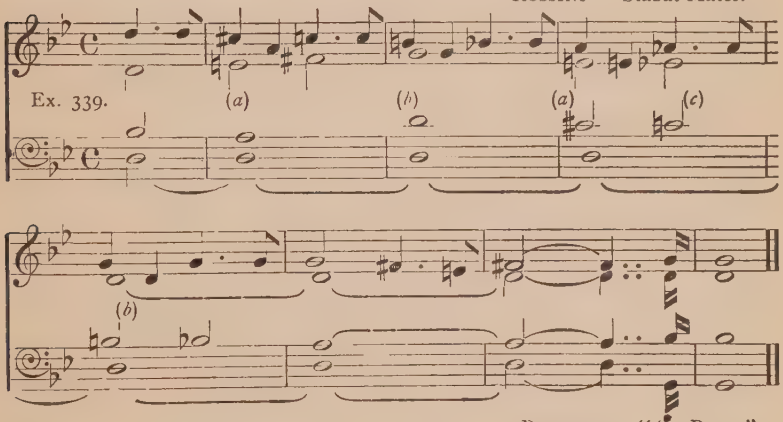
290.—Sometimes, especially in instrumental music, the pedal note, instead of being repeated or sustained, is introduced *ornamentally*, *e.g.*,



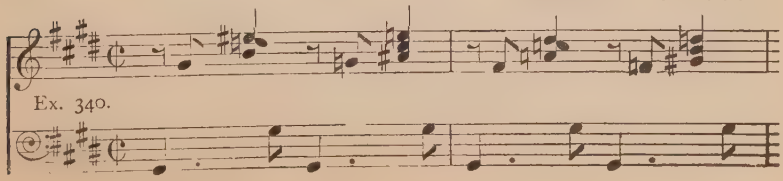
291.—Modulation to related keys is permitted above a pedal bass, and, by modern composers, is more or less freely indulged in.

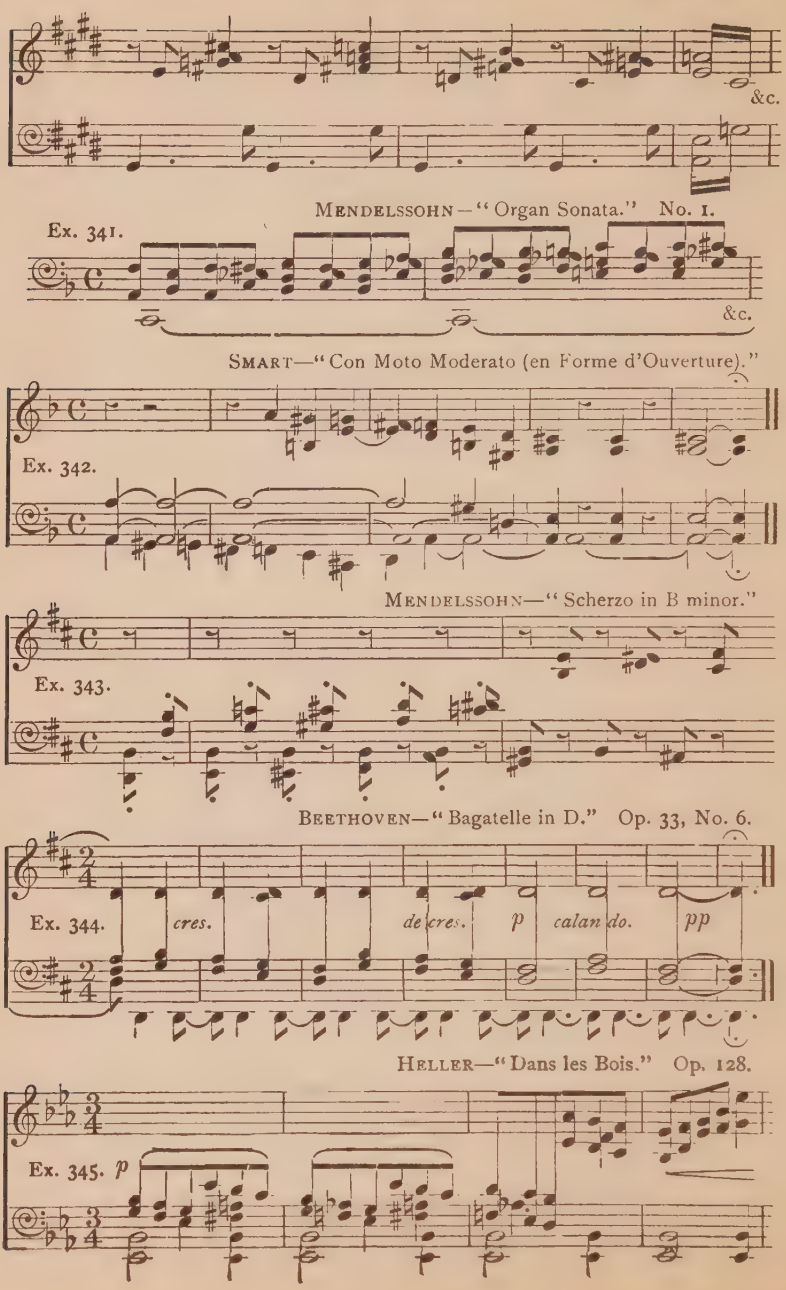
The following illustrations of pedals will fully exemplify the rules and observations contained in the preceding paragraphs.

ROSSINI—"Stabat Mater."



BENEDICT—"St. Peter."




&c.
MENDELSSOHN—"Organ Sonata." No. 1.
Ex. 341.
&c.
SMART—"Con Moto Moderato (en Forme d'Ouverture)."
Ex. 342.
MENDELSSOHN—"Scherzo in B minor."
Ex. 343.
BEETHOVEN—"Bagatelle in D." Op. 33, No. 6.
Ex. 344.
cres.
decres.
p
calando.
pp
HELLER—"Dans les Bois." Op. 128.
Ex. 345.
p

BEETHOVEN—"6th (Pastoral) Symphony."

Ex. 346.

MOSCHELES—"Study in D minor." Op. 70, No. 6.

Ex. 347.

sf

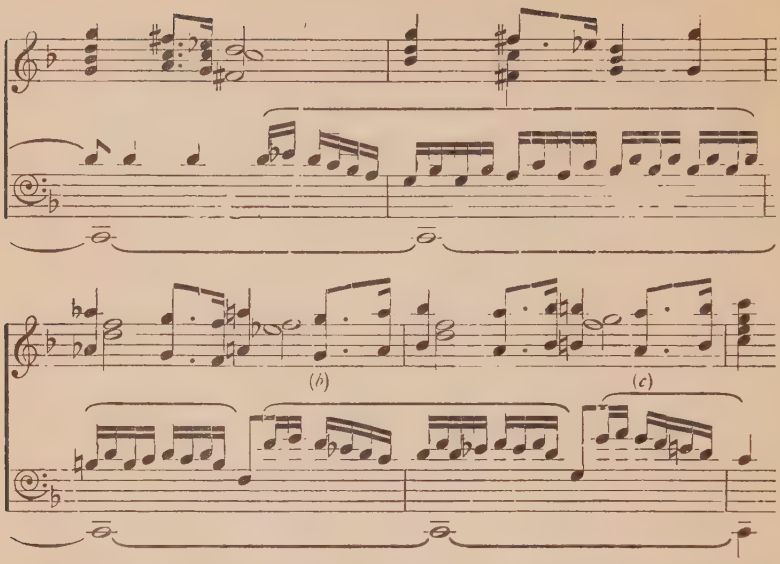
CHERUBINI—"Quartett in C."

Ex. 348.

GUILMANT—"March (on a Theme from Handel)." Op. 15.

Ex. 349.

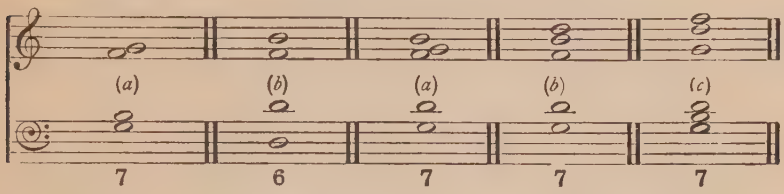
(*a*)



Ex. 339 shows a dominant pedal in G minor bearing above it (*inter alia*) the chromatic chords of the supertonic and tonic (*a*, *b*) as well as the chord of the Neapolitan 6th (*c*). Ex. 340 may be regarded as an ornamental dominant pedal in C♯ minor, bearing over it a sequence of diminished 7ths (§192). Ex. 341 is a fragment of a dominant pedal point (too long for quotation), bearing above it tonic minor 9ths resolved as dominant 9ths. Here the student should refer to the original for himself. Ex. 342 contains an inverted dominant pedal, and Ex. 343 an inverted tonic pedal. Ex. 344 shows the somewhat rare case of a tonic pedal above and below the harmony, double and triple pedals being illustrated in Exs. 345 and 346 respectively. Exs. 347 and 348 show ornamental tonic pedals, while in Ex. 349 we have a fine illustration of modulation (over a dominant pedal) to the keys of (*a*) the supertonic, (*b*) the subdominant, and (*c*) the dominant. A beautiful example of modulation (over a dominant pedal) to the major key of the mediant (in this case from D major to F) is to be found in the opening bars of Mackenzie's "Jason." Modulations like these, to unrelated keys, are somewhat rare and require careful construction.

292.—The rules given in this work for the harmonization of melodies and the construction of harmony in five parts, apply with equal force to harmony in six, seven, or eight parts, with the exception that the stringency of the rules respecting hidden consecutives and the sounding of discords with their notes of resolution relaxes in proportion to the actual number of parts employed. For harmony in more than five parts the rules for doublings in five parts will generally apply; it being understood that in those chords in which there is a choice of

notes to be doubled in four or five parts, both or all the optional notes may be doubled in more than five parts, *e.g.*, in the dominant 7th we may double either the root (*a*) or the 5th (*b*) in four and five parts, but in six parts we may double root and 5th simultaneously (*c*).



293.—If the study of this work has been complete and thorough the student will find but little difficulty in tracing the harmonic progressions of any ordinary vocal or instrumental music. The seeming complexities of the latter will all but disappear if he remember that arpeggios are governed by the same laws as chords and, like the latter, are often combined with passing and auxiliary notes.

The analysis of the works of the great masters will materially assist the student in the harmonization of the more florid melodies given here and elsewhere, showing him how to treat these melodies as vocal or instrumental solos with organ, pianoforte, or orchestral accompaniment, a subject to which the limits of our space only permit us to allude. It is desirable that the study of counterpoint should accompany, and the study of canon, fugue, and instrumentation follow the perusal of this book, so that the student may be "throughly furnished" for the effective utterance of any musical ideas which the spirit may prompt him to express.

Questions on Chapter XVIII.

1.—What are secondary 7ths, by what other names are these chords known, what degree of the scale have they for their root, and wherein do they differ from fundamental 7ths?

2.—Write out the secondary 7ths in B major and B minor and say which of them has two forms and what the use of these forms may be.

3.—Which of the diatonic 7ths cannot be regarded as a secondary 7th, and what secondary 7ths have been explained under other names in earlier chapters of this work?

4.—Which of the secondary 7ths have major 7ths, and which have major 3rds?

5.—Show how a secondary 7th differs from (*a*) a fundamental 7th in its root position, (*b*) a suspension, and (*c*) a chromatic 7th.

6.—What is the interval in a secondary 7th which always has a compulsory progression, and why is this?

7.—How, and upon what chords, are secondary 7ths generally resolved?

8.—Name a particular use of secondary 7ths.

9.—How many inversions have these chords?

10.—Write and ornamentally resolve a secondary 7th on the subdominant of F major.

11.—Write a sequence of secondary 7ths in E♭ major.

12.—What chord is figured like the secondary 7th?

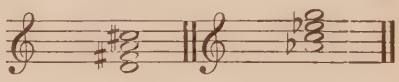
13.—How may secondary 7ths be used for the purposes of modulation? Illustrate your answer by modulating from A to E, and from E to B.

14.—Which of the secondary 7ths are generally prepared?

15.—What note in a secondary 7th may be omitted in three parts, and what note may be doubled in five parts?

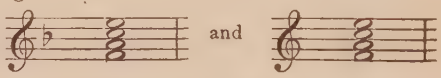
16.—Write and resolve, in two or three different ways, each of the secondary 7ths in G major and G minor.

17.—Resolve the following chords, (*a*) as secondary 7ths on the tonic, and (*b*) as dominant 13ths:—



18.—On the note B write and resolve (with correct figuring) (*a*) a tonic (secondary) 7th, (*b*) a tonic (chromatic) 7th, (*c*) a supertonic (secondary) 7th, (*d*) a supertonic (chromatic) 7th, (*e*) a diminished 7th, and (*f*) a chord of the minor 3rd, 5th, and 7th (§202).

19.—Distinguish between



20.—What are secondary 9ths, and how do they generally resolve?

21.—What is a pedal, and how do you distinguish it from a sustained or repeated note?

22.—Whence is the term pedal derived, and what is its French equivalent?

23.—Explain the terms "inverted pedal," "double pedal," and "triple pedal."

24.—What degrees of the scale are employed for pedal basses, and which of these should be the last to be used in a piece of music?

25.—What rule affects the first and last chords of a pedal?

26.—Give examples of the ornamental treatment of pedal otes

27.—What modulation is permitted over a pedal bass?

28.—In constructing a passage over a pedal bass, which part needs the greatest attention, and for what reason?

29.—In what way do the rules of four and five-part harmony affect harmony in more than five parts?

30.—Write a passage (of not less than eight bars) over a tonic pedal, and include in it examples of chromatic chords and modulation to a related key.

Exercises on Chapter XVIII.

(Roots to be indicated as in previous Chapters.)

I. (C.M. "Dundee.")

§277. * §152. §278c.

7 7 7 5 4 ♭7 6 7 4 3 7

§277. §277.

7 6 ♮ 7 ♮5 7 7 ♮ 7 7 7 7

II.

§282.

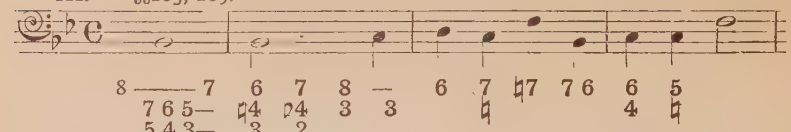
6 7 7 7 7 7 7 7 7 ♯ 8♯7 9 7 ♯

§§283, 289.

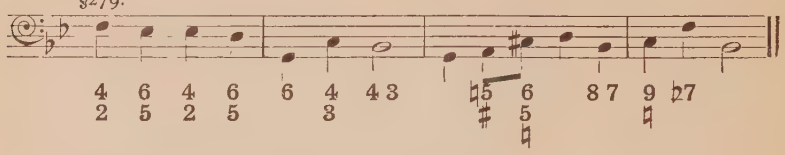
5—♯7 ♮7 6—5 6 7 7 7 7 7 7
3—4 5 4—3 4
2 3

* Double the 3rd from the primary bass and omit the 5th.

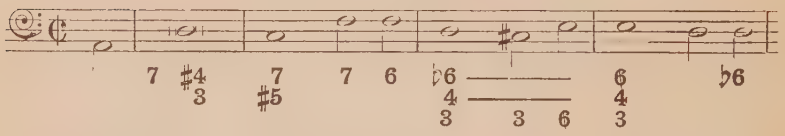
III. §§283, 289.

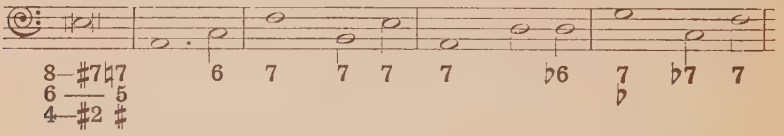


§279.

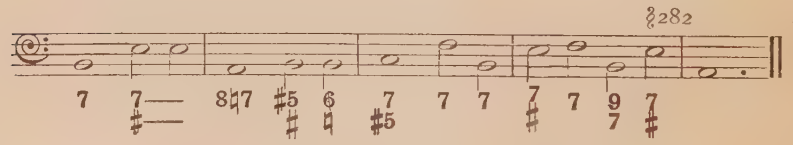


IV.

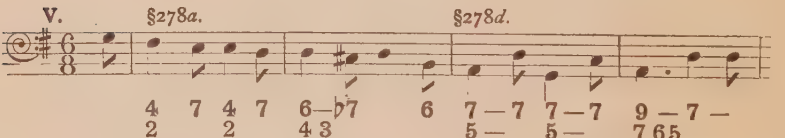


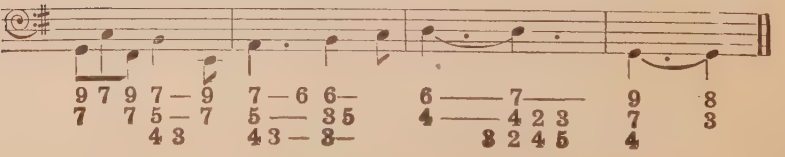


§282

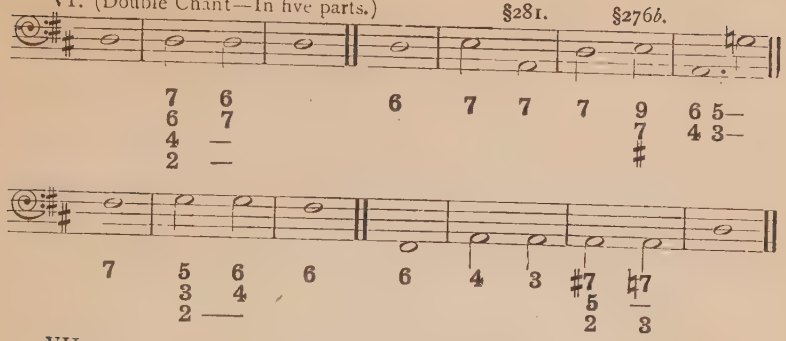


V. §278*a*. §278*d*.

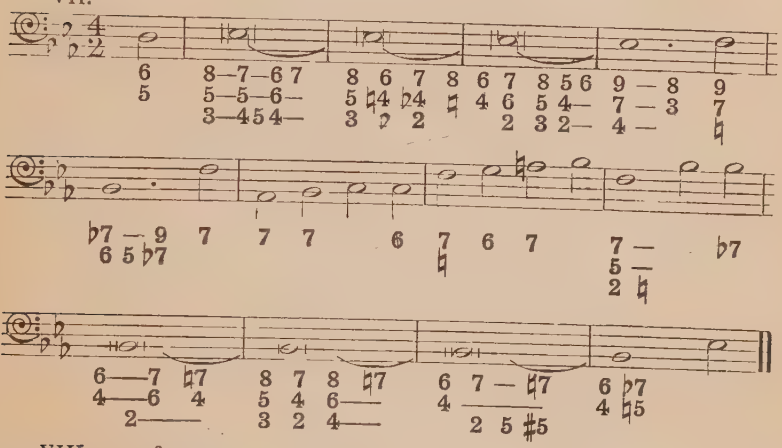




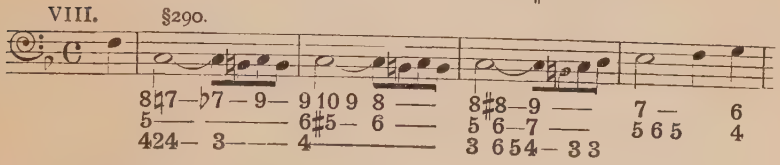
VI. (Double Chant—In five parts.) §281. §276*b*.



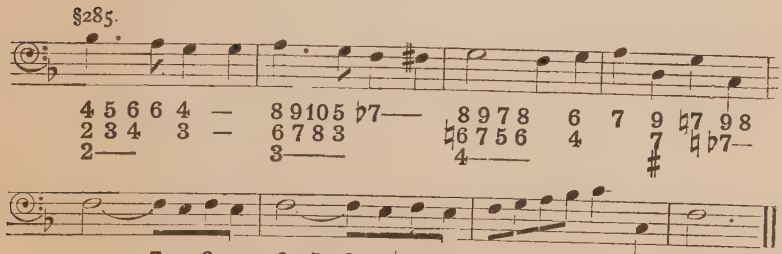
VII.



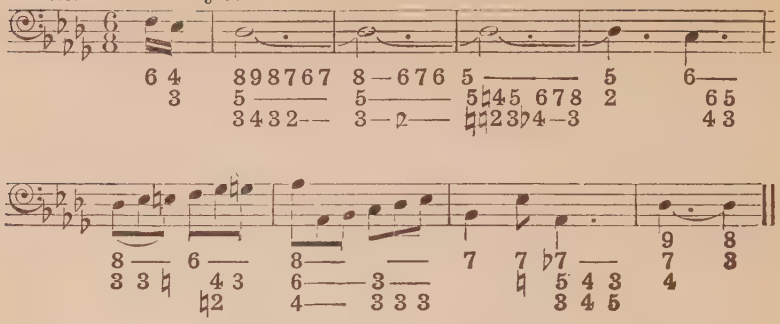
VIII. §290.



§285.



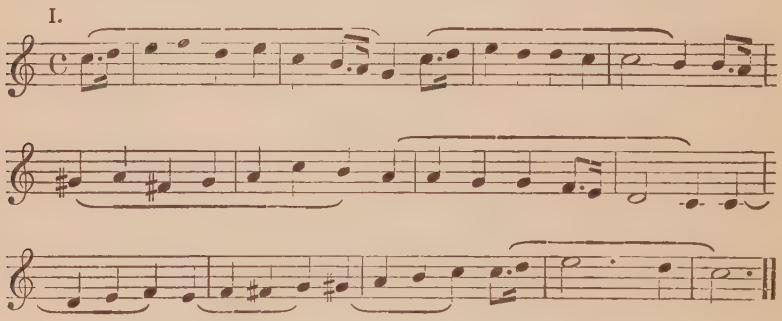
IX. §286.



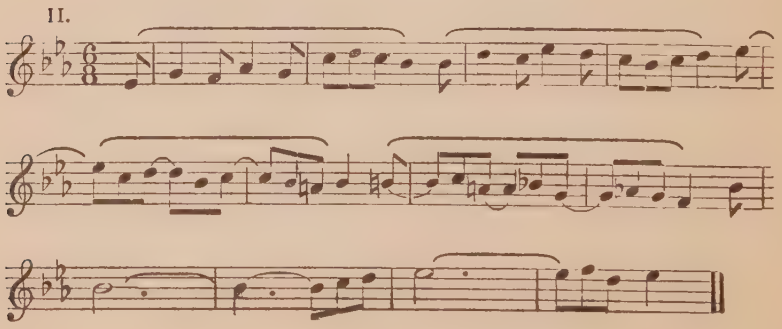
Melodies.

(To be harmonized in three, four, and five parts, and to contain examples of secondary 7ths; also examples of tonic, dominant, double and inverted pedals.)

I.



II.



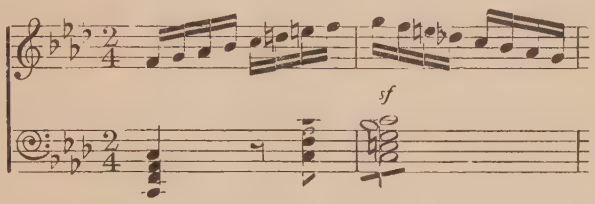
APPENDIX.

(The consideration of the examples given in this portion of THE STUDENT'S HARMONY should be postponed until the Chapter containing the sections referred to has been carefully studied.)

§17.

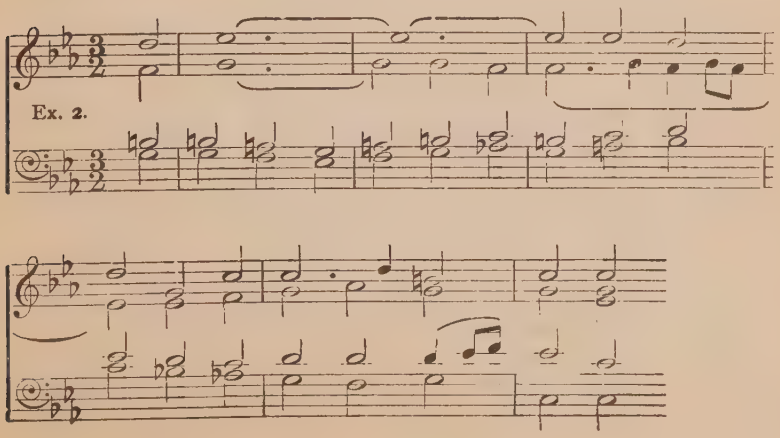
The form of the minor scale known as the melodic contains the dominant major 9th in a minor key referred to in §174. This scale is generally used for melodic passages in minor keys. Beethoven, in his Sonata Appassionata, Op. 57, gives us the melodic minor scale ascending and the harmonic descending.

Ex. 1.



The same work contains examples of a minor scale with a sharpened 6th and 7th ascending and descending, a form frequently found in the works of 17th century composers; *e.g.* Purcell, "O Give Thanks."

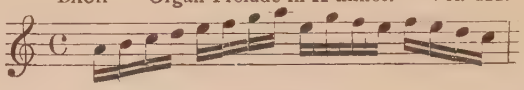
Ex. 2.



The ancient form of the minor scale, with a minor 6th and 7th ascending and descending, known as the Æolian mode, is occasionally to be found in melodic passages.

BACH—"Organ Prelude in A minor." Vol. III.*

Ex. 3.



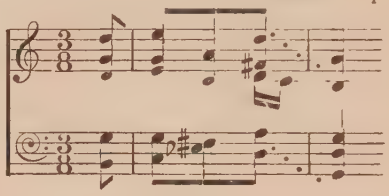
§32.

Consecutives by *similar motion* are to be found in the free style of composition when occurring

(*a*) Between primary triads (§20) or fundamental chords (§89).

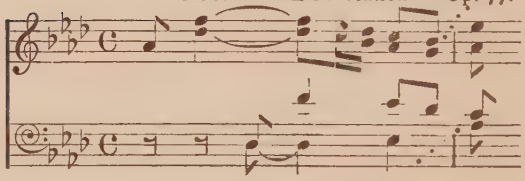
SCHUBERT—"Sonata in A minor." Op. 42.

Ex. 4.



DUSSEK—"L'Invocation." Op. 77.

Ex. 5.

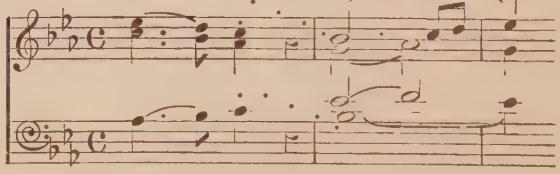


Here the 8ves and 5ths in both examples are between dominant and tonic harmonies.†

(*b*) Between different phrases.

MOZART—"Die Zauberflöte."

Ex. 6.



* Peters' Edition.

† The objectionable effect of consecutive 5ths in general has been attributed to the fact that the parts between which they occur move simultaneously in two different keys, and hence disturb our modern ideas of tonality. But as the impression of two keys is not perceptibly produced by consecutive 5ths between primary triads, these 5ths are scarcely considered objectionable and are often employed, especially in instrumental music.

CHOPIN—"Mazurka." Op. 56, No. 2.

Ex. 7.

(*c*) In keeping up a melodic figure.

BACH—"Organ Prelude in C." Vol. IV.†

Ex. 8.

RHEINBERGER—"Organ Sonata in F minor."

Ex. 9.

(*d*) In the progression of passing or auxiliary notes (§§123 & 127), or in cases of anticipation (*vide* §133, Ex. 119).

GUILMANT—"Cantilène Pastorale." Op. 15, No 3.

Ex. 10.

5ths by passing note. (See Ex. 37.)

BENNETT—"Study." Op. 11, No. 4.

Ex. 11.

5ths by auxiliary note.

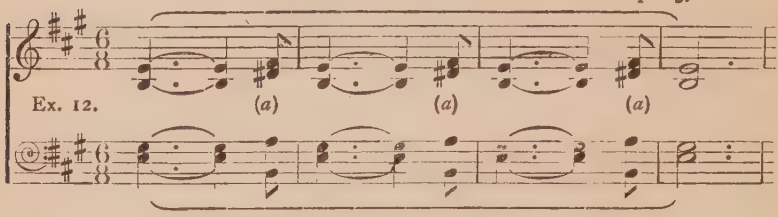
The above examples are not inserted for the student's imitation, at least not until his modesty, or his want of that virtue, permits him to believe his judgment and knowledge to be equal to that of any of the composers above quoted. By that time THE STUDENT'S HARMONY will be of little use to him.

† Peters' Edition.

§36.

Some composers, especially Bach, allow the leading note to descend to the dominant when in an inside part. (See the last bar of Ex. 31, page 51.)

HELLER—"Tarantelle in A minor." Op. 85, No. 1.



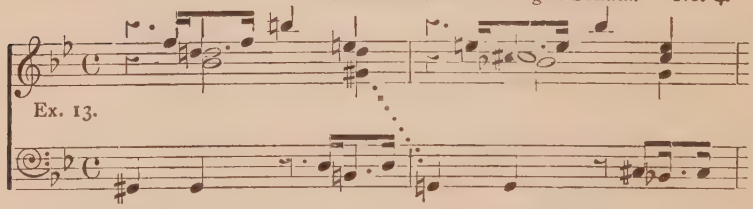
At *a*, D♯, the leading note in E, descends to B, the dominant in that key. This progression is common enough in instrumental music, but the student is advised to avoid it as much as possible in vocal music.

§41.

A false relation is not considered objectionable when occurring

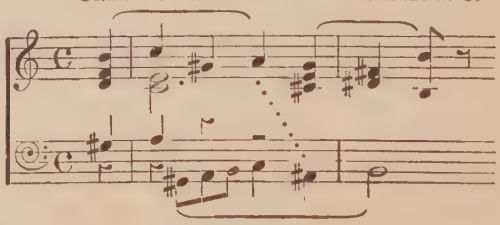
(*a*) In the resolution of chromatic chords (Chap. XI. *et seq.*).

MENDELSSOHN—"Organ Sonata." No. 4.



(*b*) Between two notes apparently of the same letter name but one of which is really an implied enharmonic.

ORLANDO A. MANSFIELD—"Postlude in C."

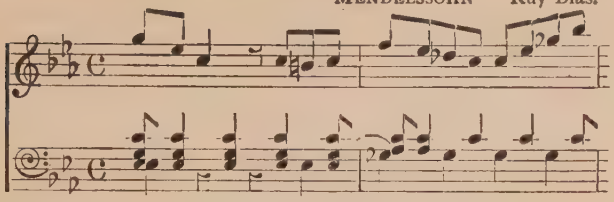


Here the A♯ in the bass is really approached as B♭, the minor 9th of A (§186). This, again, is a chromatic chord.

(*c*) **Between two chords,** one of which is a fundamental discord (§89).

MENDELSSOHN—"Ruy Blas."

Ex. 15.



Here the G and G♭ occur in different parts, but the second chord is the fundamental discord of the dominant 13th (§229).

(*d*) Between harmony notes, and passing, auxiliary, or changing notes. (*Vide* §§129*f* & 132.)

(*e*) Between two notes in the *same* chord, one of which is an implied enharmonic. (*Vide* §§175*d* & 177*e*.)

For the sake of completeness it was thought best to give all the instances of allowable false relation in one paragraph, but the student cannot expect to fully understand the examples quoted and referred to, until Chapter XI. and subsequent chapters have been studied.

§49.

The following list may interest the student and be useful as showing him that a movement may commence upon almost any harmony in the key.

Chopin's Waltz in F minor, Op. 69, No. 1, commences on the first inversion of the submediant triad.

Chopin's Scherzo in B minor, Op. 20, commences on the first inversion of the subdominant triad.

Beethoven's Bagatelle in D, Op. 126, No. 1, commences on the second inversion of the subdominant triad.

Rubinstein's Polonaise in C minor, Op. 5, No. 1, commences on the first inversion of the dominant 7th.

Schumann's Kreisleriana, No. 4, commences on the second inversion of the dominant 7th.

No. 11, of Benedict's St. Peter, commences on the third inversion of the dominant 7th.

Beethoven's Rondo, third Concerto, Op. 37, commences on the dominant 9th

Beethoven's Sonata, Op. 31, No. 3,
Mendelssohn's Wedding March,
"Midsummer Night's Dream," } commence on the dominant 11th.

Wagner's Tristan and Isolde (second Act), commences on the dominant 13th (third inversion).

Bennett's Alla Fantasia, Op. 24, commences on the supertonic 7th (first inversion).

Beethoven's Sonata in C minor, Op. 111, commences on the supertonic 9th (fourth inversion).

Beethoven's Pastoral Sonata, commences on the tonic 7th.

Heller's Arabesque in C, Op. 49, commences on the tonic 9th.

Beethoven's Finale, Sonata in F♯, Op. 78, commences on the Italian 6th.

Gade's No. 5, Psyche, commences on the German 6th.

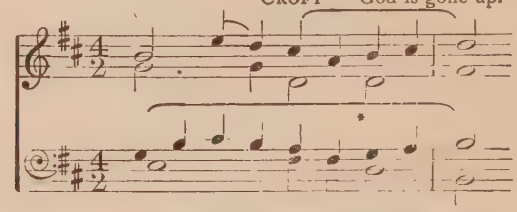
Rubinstein's Impromptu, A minor, Op. 26, No. 2, commences on the Neapolitan 6th.

§86.

We give two examples of exceptional treatment of the $\frac{6}{4}$ from the works of old English church composers. The first, and more modern example, shows a $\frac{6}{4}$ approached by skip from the *inversion* of *another* chord. The second example shows a $\frac{6}{4}$ *quitted by leap*, also to *another* chord.

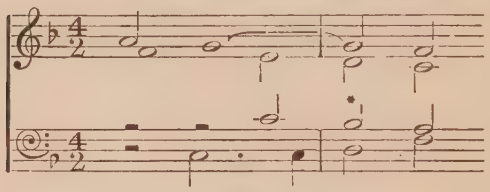
CROFT—"God is gone up."

Ex. 16.



ORLANDO GIBBONS—"Service in F."

Ex. 17.

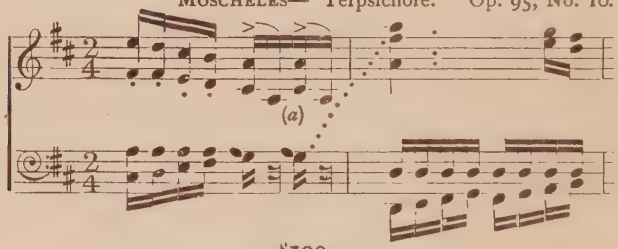


§87.

At *a* in the following example, G, the 7th from the dominant, is sounded in the bass but has its note of resolution (F) in the alto of the chord following :—

MOSCHELES—"Terpsichore." Op. 95, No. 10.

Ex. 18.

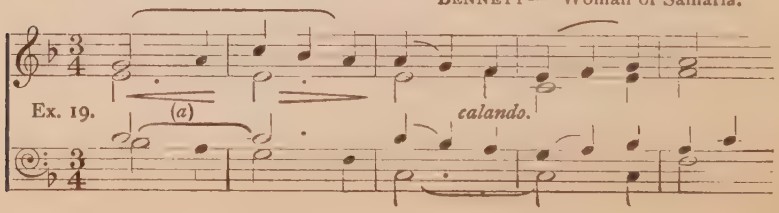


§100.

There is also a possible, though somewhat rare, resolution of the dominant 7th upon the mediant triad, as at *a* in the following example.

BENNETT—"Woman of Samaria."

Ex. 19.

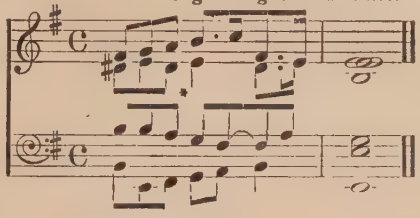


§101.

The following examples may interest the student. In Ex. 20 the second inversion of the dominant 7th, with the 7th doubled, is followed by the first inversion and not the root position of the tonic chord. In Ex. 21 the same form of the dominant 7th is followed by the root position of the dominant harmony.

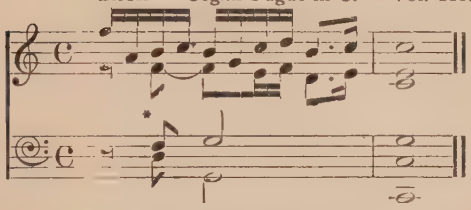
BACH—"Organ Fugue in E minor." Vol. III.†

Ex. 20.



BACH—"Organ Fugue in C." Vol. III.†

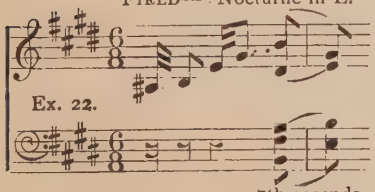
Ex. 21.



Although the 7th does not usually ascend save in the particular cases mentioned in §§101 and 105*a*, the following examples of exceptional treatment are given for the sake of completeness and not for imitation.

FIELD—"Nocturne in E."

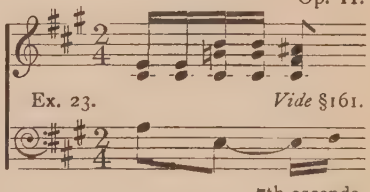
Ex. 22.



7th ascends.
Root position.

SCHUMANN—"Pianoforte Sonata." Op. 11.

Ex. 23. *Vide* §161.



7th ascends.
Third inversion.

Another instance of an ascending 7th in the resolution of the root position of a dominant 7th is to be found in Ex. 333, page 253.

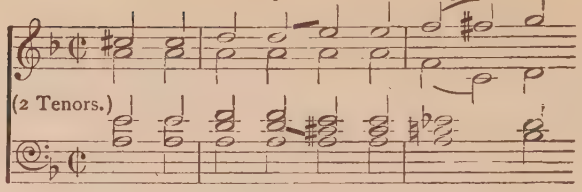
Page 100.

In writing a cadential $\frac{6}{4}$ (§72) in five parts, the *4th* may be doubled provided one 4th can proceed to the 3rd of the bass and the other 4th rise to the 5th.

† Peters' Edition.

E. J. HOPKINS—"Magnificat in F."

Ex. 24.

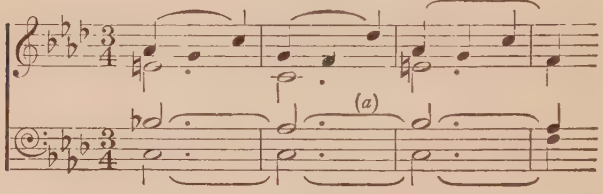


§127.

The following examples of exceptional treatment of auxiliary notes are not given for the student's imitation. At *a* the auxiliary note leaps a 4th, probably to keep up the sequence in melody. At *b* it leaps a 6th.

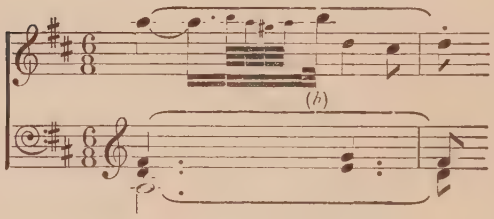
SCHUBERT—"Fantasia." Op. 15.

Ex. 25.



MOZART—"Sonata in D."

Ex. 26.

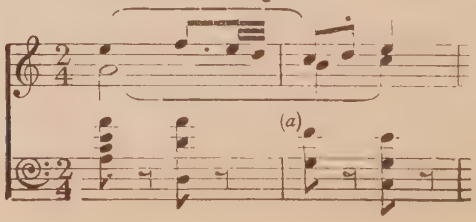


§128.

At *a* in the following example we have an auxiliary note, C, a tone below the harmony note, D.

MENDELSSOHN—"Quartett in A minor." Op. 13.

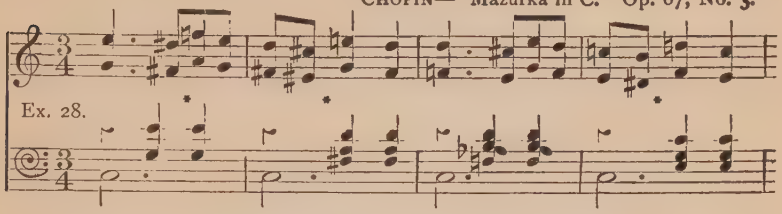
Ex. 27.



§131.

Ex. 28 shows, at the places indicated by the asterisk, allowable false relation induced by changing notes.

CHOPIN—"Mazurka in C." Op. 67, No. 3.

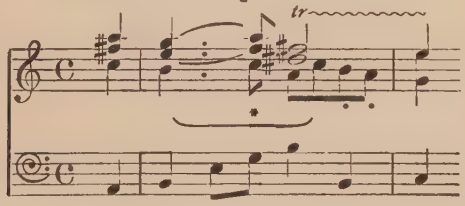


§132.

In Ex. 29 we have, at the asterisk, an example of three auxiliary notes simultaneously leaping down a 3rd to a harmony note, and, at the same time, involving false relation.

MENDELSSOHN—"Quartett in A minor." Op. 13.

Ex. 29.



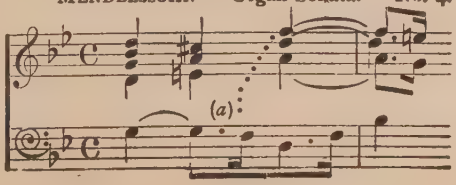
Observe the doubled 3rd in the final (submediant) chord (§107)

§133.

Occasionally we meet with an anticipation not occurring in the same part as the note anticipated (Ex. 30*a*). At other times the note anticipated is not an essential note, but a passing note, as at *b*, Ex. 31, or an auxiliary note (Ex. 32*c*). Sometimes two or more passing notes are anticipated (Ex. 33*d*).

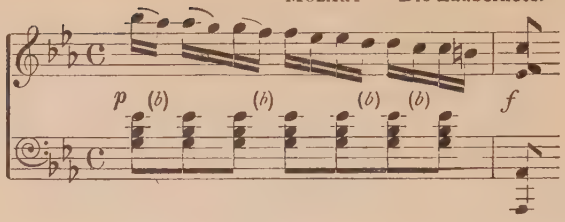
MENDELSSOHN—"Organ Sonata." No. 4.

Ex. 30.



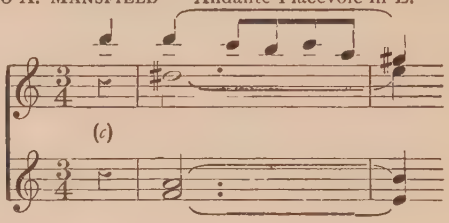
MOZART—"Die Zauberflöte."

Ex. 31.



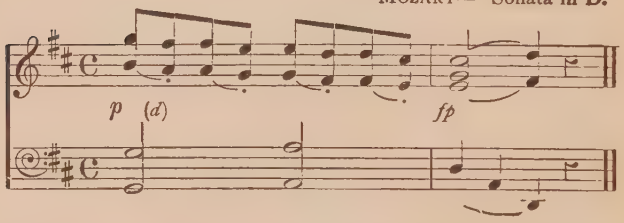
ORLANDO A. MANSFIELD—"Andante Piacevole in E." (Organ.)

Ex. 32.



MOZART—"Sonata in D."

Ex. 33.



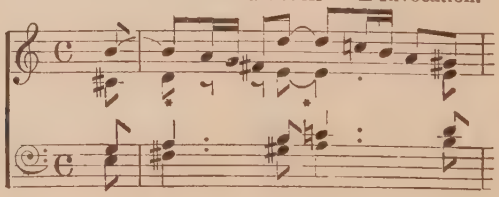
Observe the allowable false relation (D♯ and D♮) produced by the auxiliary note, D, in Ex. 32.

§141.

This rule is, however, frequently disregarded in instrumental music, *e.g.*,

DUSSEK—"L'Invocation."

Ex. 34.



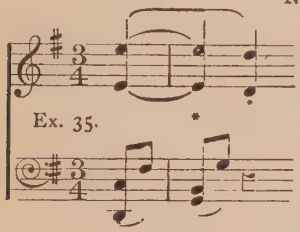
Here the suspended notes denoted by the asterisk have their note of resolution sounded with them in an inside part, and not in the bass.

§142.

The 5th in a common chord is sometimes suspended by the 6th. The original position of this suspension is shown in Ex. 35, the first inversion in Ex. 36, the 5th in the bass in Ex. 37, and in Ex. 38 the suspended note is in the lowest part. Observe that the suspension is accompanied by a 3, also that the lowest part of Ex. 36 is a tonic pedal (§§283-289), and need not be regarded in calculating the harmonies above it.

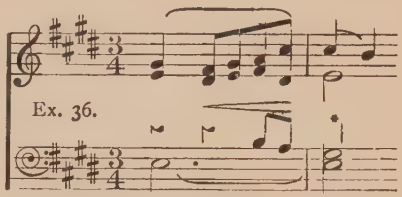
SCHUMANN—"Die Davidsbündler." No. 1.

Ex. 35.



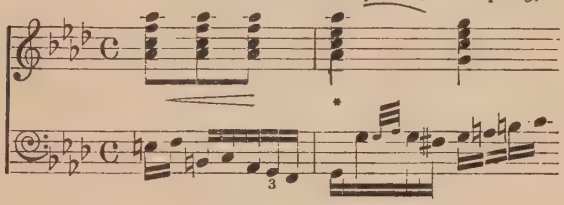
O. A. MANSFIELD—"Andante Piacevole in E." (Organ.)

Ex. 36.



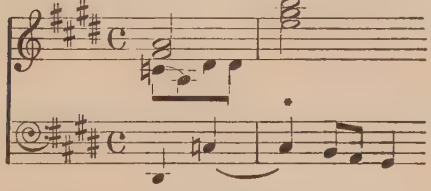
F. HILLER—"Study in A♭." Op. 15, No. 9.

Ex. 37.



BEETHOVEN—"Sonata in E." Op. 109.

Ex. 38.

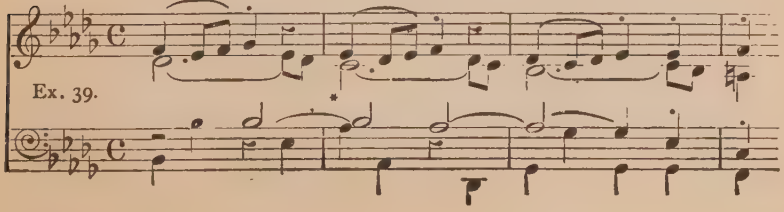


§143 (*b*).

A 2 to 1 is, however, by no means uncommon in instrumental music, *e.g.*,

BEETHOVEN—"Quartett in B♭." Op. 130.

Ex. 39.

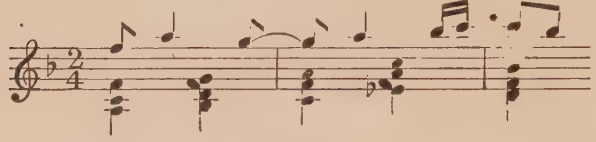


§143 (*d*).

In the case of doublings in the 8ve, we often find the doubling suspended and prepared by the 8ve, as at *.

BEETHOVEN—"Sonata in F." Op. 10, No. 2.

Ex. 40.

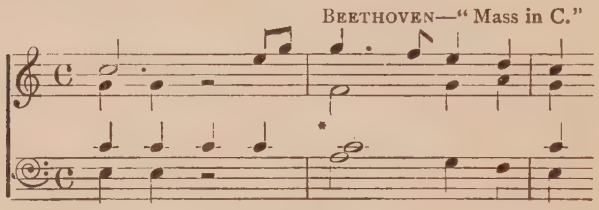


§144 (*a*).

The first inversion of a 9 to 8 is sometimes used with the root in an inside part, as in the exceptions given to §141.

BEETHOVEN—"Mass in C."

Ex. 41.



§156 (*a*).

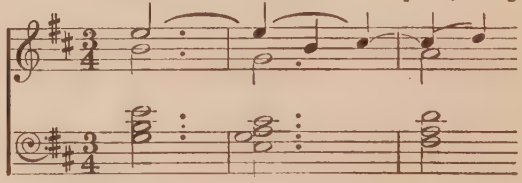
An example of a 7 to 8 with the root a 2nd above the 7th is to be found in Schumann's Kreisleriana, No 7, nineteen bars from the end.

§156 (*b*).

This rule, as in the case of the suspended 9th (*Appendix*, Ex. 40), is relaxed in cases involving mere doublings in the 8ve, *e.g.*,

BEETHOVEN—"Sonata in D." Op. 10, No. 3.

Ex. 42.



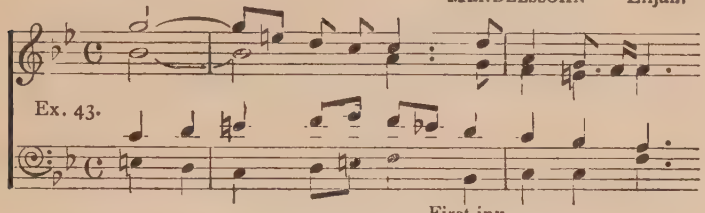
An example of a 2 to 3 similarly treated will be found in the second bar of *Appendix*, Ex. 40.

§157.

We append some illustrations of the less known and used double suspensions.

MENDELSSOHN—"Elijah."

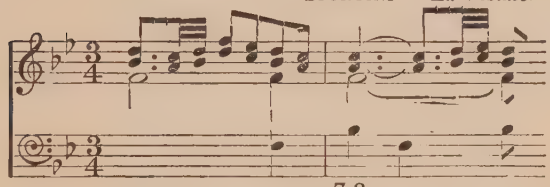
Ex. 43.



First inv.
9 8
4 5

SPONTINI—"La Vestale."

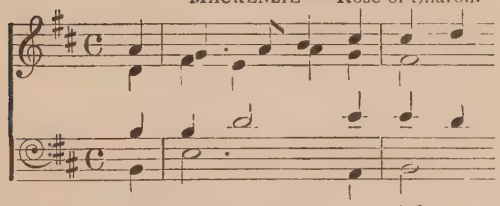
Ex. 44.



7 8
2 3
Ornamentally resolved.

MACKENZIE—"Rose of Sharon."

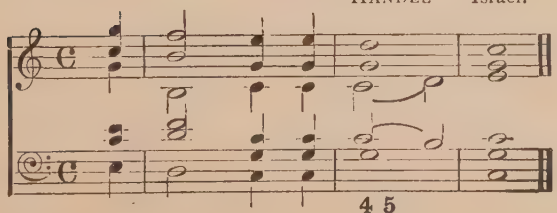
Ex. 45.



4 3
2 3

HANDEL—"Israel."

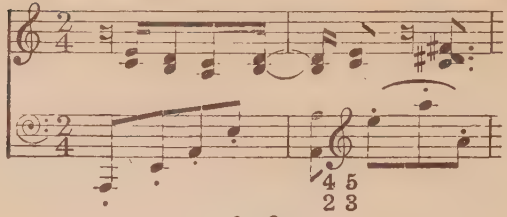
Ex. 46.



4 5
4 3

BRAHMS—"Variations on a Theme by Paganini." Op. 35.

Ex. 47.

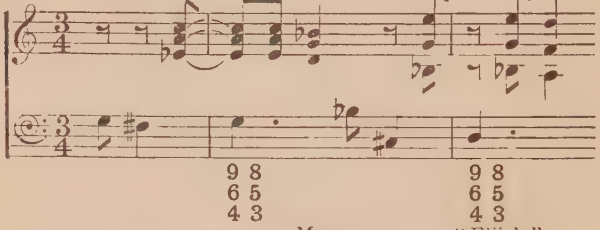


§158

The following examples show triple suspensions other than $\begin{smallmatrix}9&8\\7&8\\4&3\end{smallmatrix}$ although the series is by no means exhaustive.

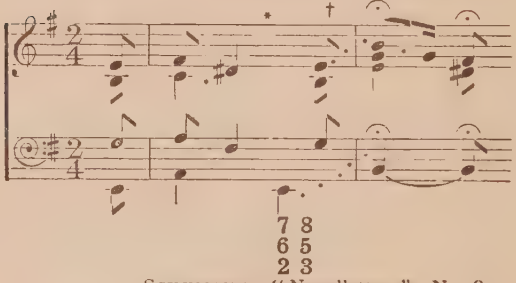
BACH—"Organ Prelude in A minor." Vol. IV.‡

Ex. 48.



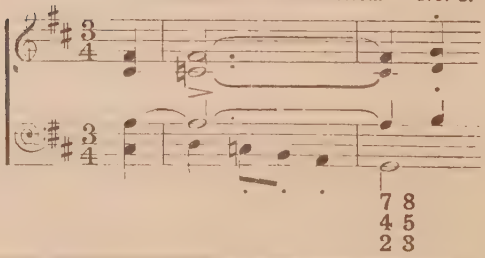
MENDELSSOHN—"Elijah."

Ex. 49.



SCHUMANN—"Novelletten." No. 8.

Ex. 50.



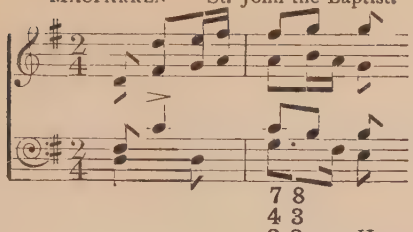
* The first inversion of this suspension (with 3rd in bass) is to be found in the second bar of Beethoven's Sonata Pathétique, Op. 13.

† Observe the 8ves between tonic and dominant.

‡ Peters' Edition.

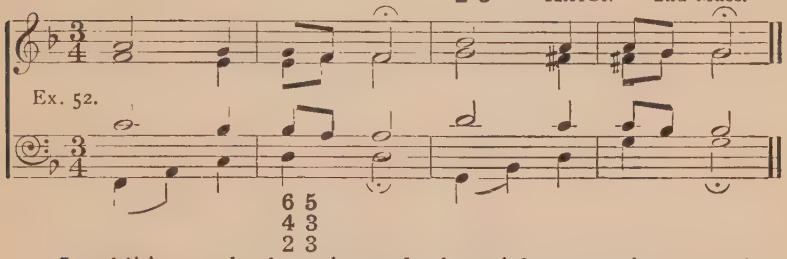
MACFARREN—"St. John the Baptist."

Ex. 51



HAYDN—"2nd Mass."*

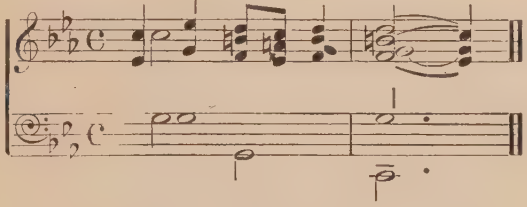
Ex. 52.



In addition to the foregoing and other triple suspensions, we often find, especially in the works of Bach, suspensions of whole chords. These are generally dominant 7ths or 9ths suspended over some note of the tonic chord. The following examples illustrate the employment of these suspensions which will be better understood when Chapter XIV. has been studied.

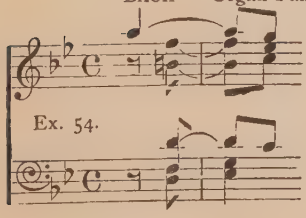
BACH—"Organ Fugue in C minor." Vol. III.†

Ex 53.

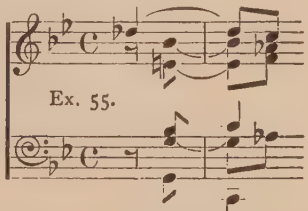


BACH—"Organ Fantasia in G minor." Vol. II.†

Ex. 54.



Ex. 55.



Ex. 53 shows the dominant 7th sustained over the tonic (C).
Ex. 54 „ „ „ 9th „ „ „ 3rd of the tonic (C).
Ex. 55 „ „ „ 9th „ „ „ 5th of the tonic (F).

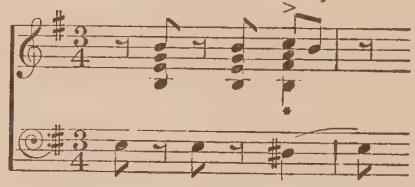
* See also Mendelssohn's Lieder ohne Worte, No. 16, bar 4. † Peters' Edition

§165.

The insertion of the root in the inversions of chords of the 9th is generally found in instrumental music. We append three examples, but must add that in the first the 9th partakes largely of the character of an auxiliary note; in the second the root strongly resembles a doubling of the melody in the octave below; and in the third example the root would, by some, be regarded as a dominant pedal (§§283-7).

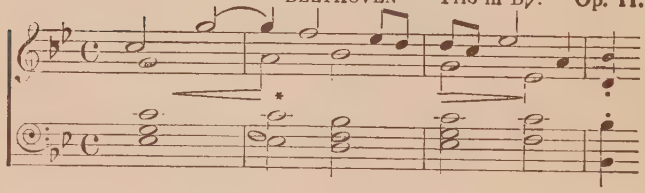
SCHUBERT—"The Weary Heart."

Ex. 56.



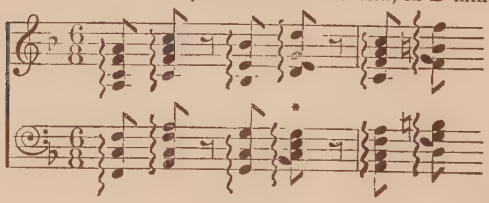
BEETHOVEN—"Trio in B♭." Op. 11.

Ex. 57.



GADE—"Sonata (Pianoforte and Violin) in D minor." Op. 21.

Ex. 58.

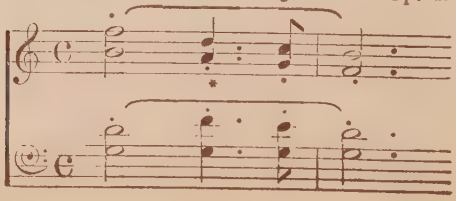


§166.

At * below is an example of a dominant 9th with the 3rd omitted.

PROUT—"Pianoforte Quartett." Op. 2.

Ex. 59.

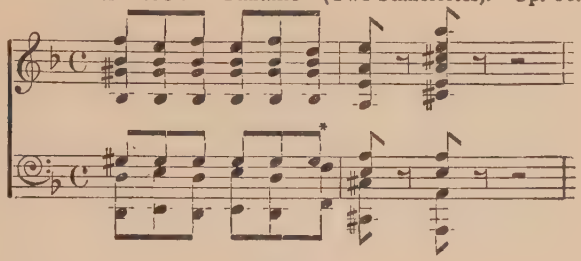


§172.

In the following example the 9th resolves irregularly, by leaping to the 3rd of the chord of resolution, instead of proceeding conjunctly to the 5th.

MAX BRUCH—"Fantasie" (Two Pianofortes). Op. 11.

Ex. 60.

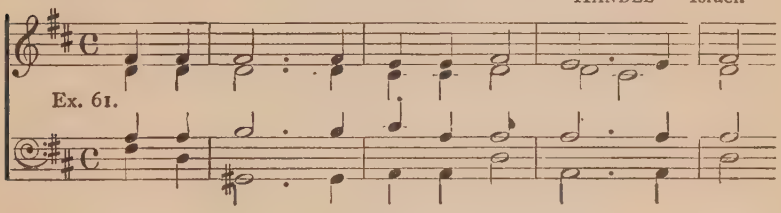


§176.

If the supertonic 9th resolve directly upon the dominant triad, it is not generally supposed, by so doing, to constitute a modulation into the key of the dominant, provided the dominant chord be followed by the tonic or some other chord or chords defining the original key. In the following example, according to this view, there is no modulation to the key of A, that key being merely *suggested*, not established.

HANDEL—"Israel."

Ex. 61.

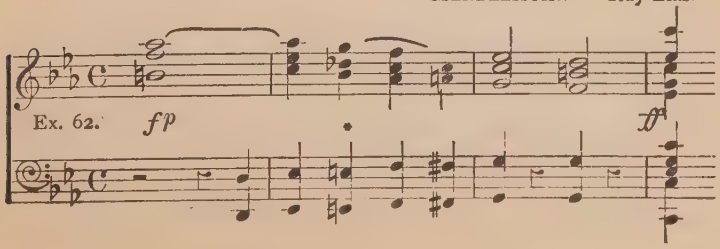


§177.

The resolution of the tonic 9th upon the subdominant triad does not constitute a modulation into the key of the subdominant, provided the chord of resolution be followed by harmonies defining the original key. Hence, in the following example there is no modulation tc F minor, although the tonic 9th in C minor resolves on that chord.

MENDELSSOHN—"Ruy Blas."

Ex. 62.

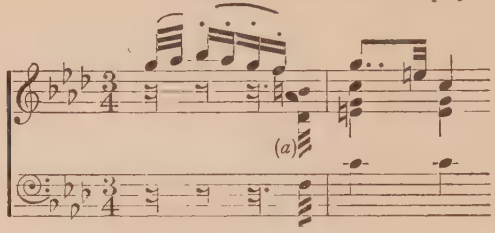


§180.

The following example contains, at *a*, the 7th (in the 3rd inversion of a 9th) ascending a 5th.

HUMMEL—"Grand Duo." Op. 92.

Ex. 63.

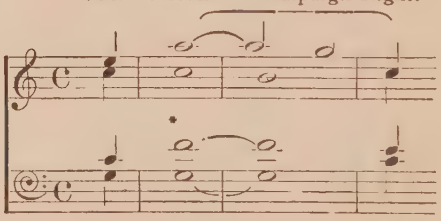


§199.

We give two examples of forms of the 11th other than those given in §198. The first example shows the root, 7th, 9th, and 11th, and the second gives root, 5th, 7th, 9th, and 11th, the 5th being in the bass

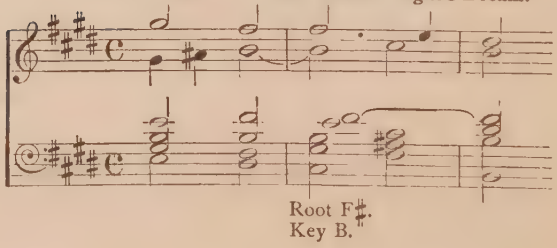
MENDELSSOHN—"Walpurgis Night."

Ex. 64.



MENDELSSOHN—"Midsummer Night's Dream."

Ex. 65.



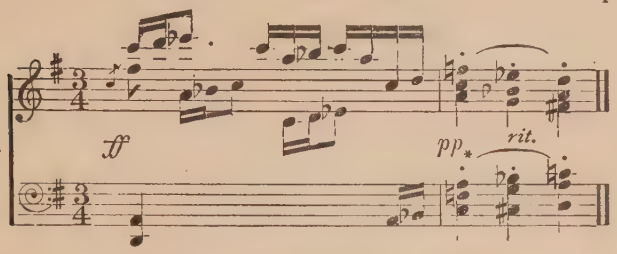
Owing to the presence of the 7th from the root we do not regard this chord as a suspension (§196).

§211.

Here is an interesting example of a tonic 11th (7th, 9th, & 11th) resolving upon the last inversion of a German 6th (§250*c*).

RHEINBERGER—"Toccata." Op. 12.

Ex. 66.

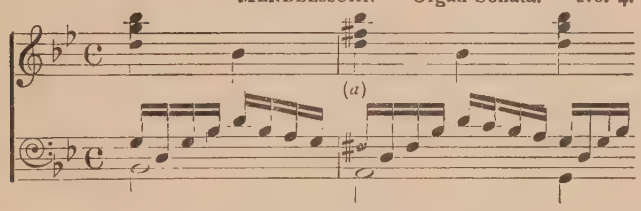


§218.

The following are a few of the less common forms of the dominant 13th.

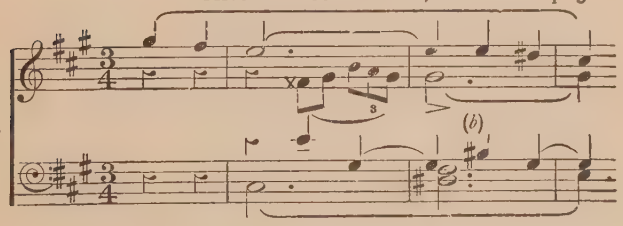
MENDELSSOHN—"Organ Sonata." No. 4.

Ex. 67.



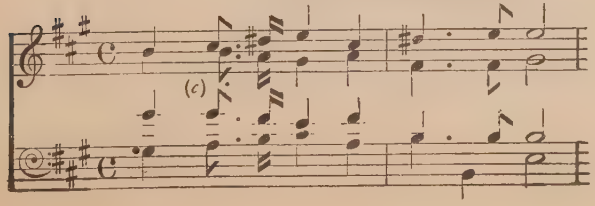
CHOPIN—"Scherzo in B♭ minor." Op. 31.

Ex. 68.



HANDEL—"Alexander's Feast.'

Ex. 69.



CHOPIN—"Ballade in G minor." Op. 23.

Ex. 70.

(d)

CHERUBINI—"2nd Mass."

Ex. 71.

(e)

GOUNOD—"Redemption."

Ex. 72.

(f)

HANDEL—"Utrecht Jubilate."

Ex. 73.

(g)

(a)—Dominant 13th (root, 3rd, 5th, and 13th). Key G minor.
(b)—Dominant 13th (root, 3rd, 5th, 7th, and 13th). Key C♯ minor.
(c)—Dominant 13th (root, 7th, 9th, and 13th). Key E major.
(d)—Dominant 13th (root, 9th, 11th, and 13th). Key G minor.
(e)—Dominant 13th (minor 9th, D♯ = E♭, 11th, and 13th doubled). Key G.
(f)—Dominant 13th (3rd, 5th, 9th, and 13th). Key G.
(g)—Dominant 13th (5th, 7th, 11th, and 13th). Key C.*

Note the importance of correctly determining the key in examples similar to that at *e*. Here B could not be the root of the chord, as the context proves it to be in the key of G. The problem is solved by reading E♭ instead of D♯, *i.e.* minor 9th instead of augmented 8ve of the dominant.

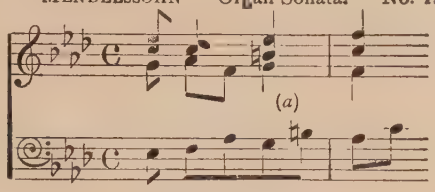
* This chord may be regarded as a secondary 9th. *Vide* §282.

§222.

The first form of the dominant 13th is sometimes resolved on the subdominant triad as at *a*, or upon the chord of the Neapolitan 6th (§267) as at *b*.

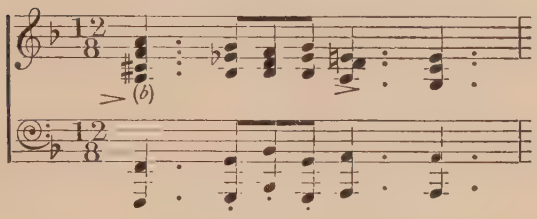
MENDELSSOHN—"Organ Sonata." No. 1.

Ex. 74.



MAX BRUCH—"Fantasie (Two Pianofortes)." Op. 11.

Ex. 75.

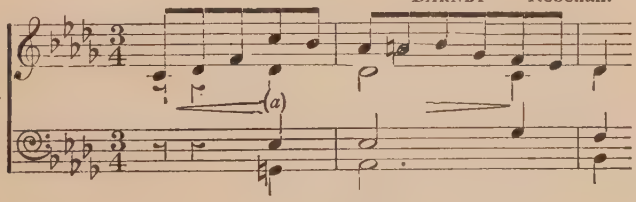


§228.

The following illustrations give some of the most common forms of the supertonic and tonic 13ths.

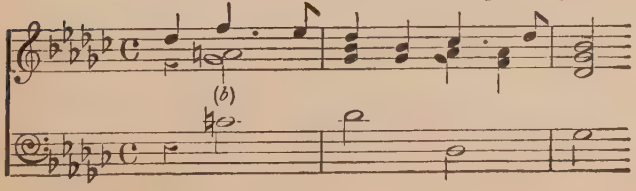
BARNBY—"Rebekah."

Ex. 76.



STAINER—"Daughter of Jairus."

Ex. 77.



GOUNOD—"Redemption."

Ex. 78.

(c)

FIELD—"Nocturne in F." No. 16.

Ex. 79.

(d)

MENDELSSOHN—"22nd Psalm."

Ex. 80.

(e)

BEETHOVEN—"Sonata in E♭." Op. 31, No. 3.

Ex. 81.

(f)

At *a* we have the supertonic major 13th in the key of D♭ (root, 3rd, 7th, and 13th) resolving on its own root. Ex. 77*b*, gives us the same chord and resolution in G♭ major, but containing the 3rd, 7th, minor 9th and 13th, the minor 9th being written as an augmented 8ve (A♮ = B♭♭). At *c* the chord consists of the minor 9th, 11th, and minor 13th of the supertonic in the key of A, and the resolution is upon the dominant 7th in that key. At *d* a chord proved by the connection (which space does not permit us to quote) to be the dominant chord of A minor, is quitted as a supertonic 13th (3rd, minor

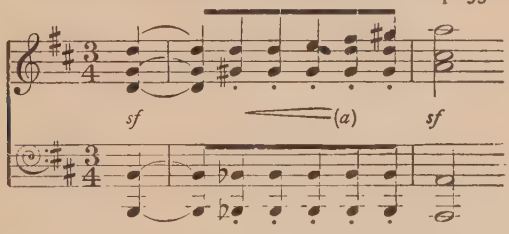
9th, G♯ = A♭, and major 13th) in the key of F, being resolved upon the dominant 7th of the latter key. Treated in this manner, this form of the supertonic 13th has the appearance of a major triad on the leading note. At *e* the tonic minor 13th (B♯ = C♮) in the key of E is resolved upon the dominant 11th or "added 6th" (§205*c*). Here we know that the chord at *e* is not a 13th upon G♯, because the connection clearly points to the key of E, in which G♯ is neither dominant, supertonic, nor tonic, and cannot therefore bear a fundamental discord (§89*j*). At *f* the tonic minor 13th in E♭ resolves upon the minor chord of the subdominant, *i.e.* the dominant 7th, 9th, and 11th (§214), it being understood that E♭, A♭, and C♭ are, in imagination, heard on the third beat of the second bar of Ex. 81. Like other tonic discords, with the exception of tonic 11ths (§211), tonic 13ths are much less common than those on the supertonic. Further examples of tonic and supertonic 13ths are to be found in the examples appended to §239.

§252.

The following examples contain illustrations of the employment of the less known and rarely used forms of the augmented 6th. The chords marked *a*, *b*, *c*, and *d* are those described under these headings in §252. The last chord is that described in 252*d*, resolved as a dominant 13th.

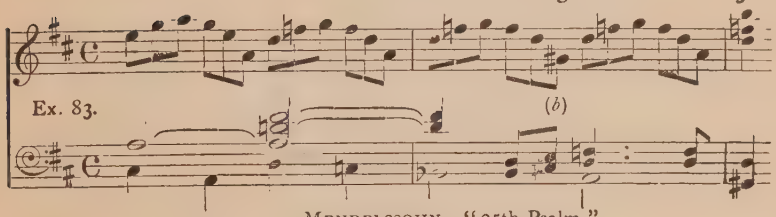
SCHUBERT—"Sonata in D." Op. 53.

Ex. 82.



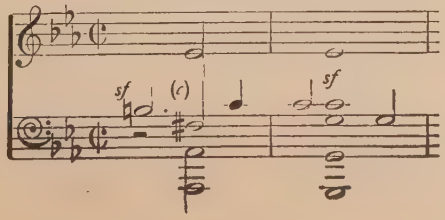
MENDELSSOHN—"Organ Sonata." No. 5.

Ex. 83.



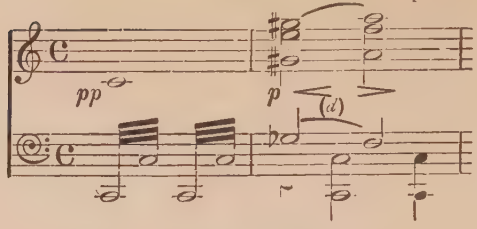
MENDELSSOHN—"95th Psalm."

Ex. 84.



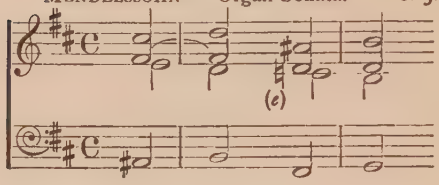
GOUNOD—"Redemption."

Ex. 85.



MENDELSSOHN—"Organ Sonata." No. 5.

Ex. 86.



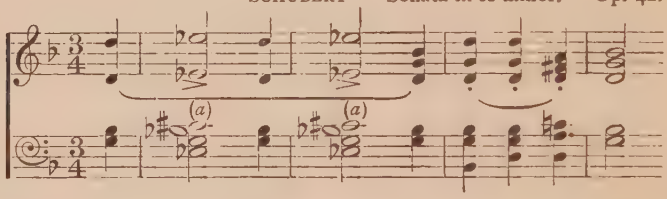
At *d* the augmented 6th is inverted (§257), C, the 4th from the primary bass, G♭, being in the lowest part. G♯ should read A♭. A beautiful example of §252*b* is to be found in the first chord of Wagner's "Tristan and Isolde." At *e* we have the augmented 6th as an enharmonic equivalent for the dominant minor 13th in G major, A♯ = B♭. The chords at *d* and *c* are identical as regards intervals (were *d* correctly noted), but differ in name and resolution.

§254.

The following examples show some exceptional resolutions of the augmented 6th upon the tonic chord.

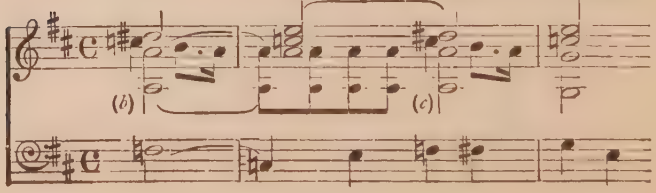
SCHUBERT—"Sonata in A minor." Op. 42.

Ex. 87.



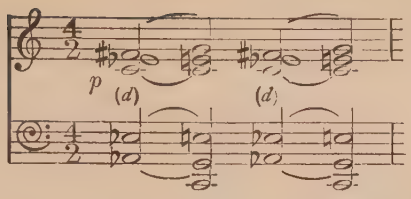
SMART—"Con Spirito in D" (Organ).

Ex. 88.



GADE—"Psyche."

Ex. 89.



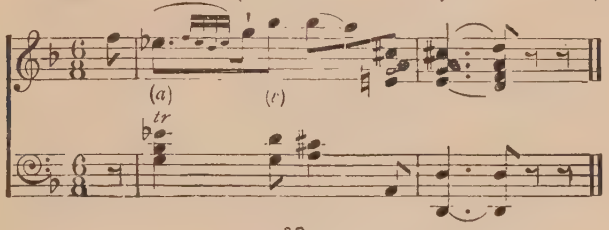
At *a* the primary bass of the augmented 6th in G minor leaps a 3rd to the tonic chord, at *b* it falls a 4th to the first inversion of the tonic, and at *d* a 5th to the root position of the tonic. Observe that at *c* the augmented 6th is resolved upon the supertonic 7th of the key (A minor), the upper note remaining stationary and the lower rising a chromatic semitone (253*b*). This supertonic 7th in A minor becomes, by implied enharmonic change (D♯ = E♭), the supertonic 9th of C major (§186).

§269.

Occasionally the Neapolitan 6th (*a*) is followed by the subdominant chord (*b*), *e.g.*, in D minor,

MOZART—"Sonata (Violin and Pianoforte) in F." No. 6.†

Ex. 90.

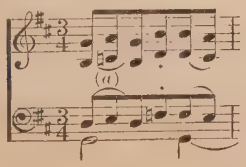


§285.

At *a*, Ex. 91, we have the $\frac{6}{4}$ on the submediant of the key of G followed by the $\frac{6}{4}$ on the dominant, the note G, in the bass, being a tonic pedal (§283). Generally, however, it is the second inversion of the *chromatic* chord on the supertonic (§112) which precedes the second inversion of the tonic chord. At *b*, Ex. 92, the second inversion of the supertonic chord in B♭ is followed by the second inversion of the tonic, the supertonic being suspended (§135). An instance of a second inversion of a *dominant 7th* (§§89, 90) followed by the second inversion of a subdominant chord, is to be found at the end of the third line of the Choral, "Commit thy ways," in Bach's St. Matthew Passion. Other interesting examples of consecutive inversions may be discovered in the chorals of this great master.

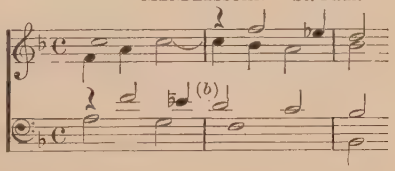
SCHUMANN—"Novellette in D." No. 5.

Ex. 91.



MENDELSSOHN—"St. Paul."

Ex. 92.



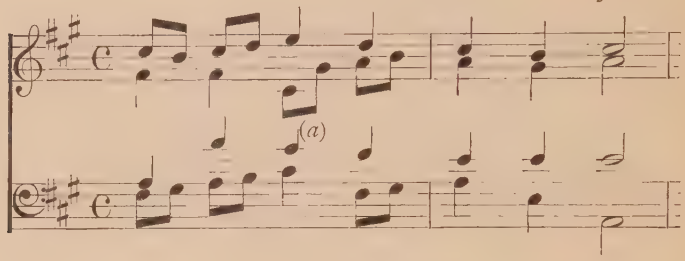
† Peters' Edition.

§37.

Of the examples of the doubled leading note referred to on p. 14, the first is in five-part harmony, and the second illustrates the rare second inversion of the mediant triad. The following four-part examples illustrate, at *a* and *b* respectively, the root position and first inversion of the mediant triad with the 5th (leading note) doubled.

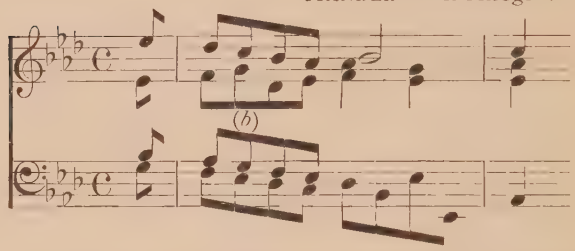
BACH—"Passion"—St. John.

Ex. 93.



HANDEL—"L'Allegro."

Ex. 94.



The leading note may also be doubled under the conditions stated in the second foot note on p. 35.

§150.

In addition to ornamental resolutions there exists a species of resolution which, for want of a better term, may be described as elliptical. In this case the suspended note proceeds to another note of the chord, but does not return to its proper note of resolution. An excellent example is to be found in Schubert's "Impromptu in B♭," Op. 142, No. 3, five bars from the end, where D is suspended over the chord of C minor and falls to G without returning to C over the same chord. We append two other examples, the first showing at *a* the suspended 6th in its second inversion (*see* p. 277) falling to the root and not returning to the 5th, the second showing at *b* the retarded 7th falling to the 5th and not proceeding to the 8ve. It is scarcely necessary to remind the student that these resolutions are quite exceptional.

SPONTINI—"La Vestale."

Ex. 95.

(*a*)

HAYDN—"The Creation."

Ex. 96.

(*b*)

§§135, 145, 256, &c.

Although, strictly speaking, suspensions when resolved should result in common chords or chromatic triads, it is possible, though rarely done, to suspend the 6th of the chord of the augmented 6th, and a few other combinations, in such a way as shall fulfil all the conditions of suspensions except the resolution upon a common chord, and, at the same time, produce a harmony which shall be incapable of inclusion under any of the fundamental harmonies tabulated in this work. Thus, at *a*, the 6th in the chord of the augmented 6th is suspended by the 7th.

BACH—Chorale—"Ich hab' mein' Sach'."

Ex. 97.

(*a*)

— 7 6 ♯ — 6 ♮7 6 7 6 ♯
5 —
♮ —

Had the chord at *a* been a secondary 7th on the submediant (Chap. XVIII.) it would scarcely be resolved as here.

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